



OFFICE OF SURFACE MINING-UTAH EVALUATION AGREEMENT

The Office of Surface Mining Reclamation and Enforcement (OSM), Western Regional Coordinating Center (WRCC), and the State of Utah, Division of Oil, Gas and Mining (DOGM), jointly prepared this agreement for the evaluation of Title V implementation of the Surface Mining Control and Reclamation Act in Utah.

This OSM-Utah agreement establishes the basic elements to be evaluated in Utah. Evaluations will be directed and conducted by the OSM-Utah team in accordance with its team charter.

OSM Directive REG-8 serves as guidance for the selection of evaluation topics. The specific topics that will be chosen for review are those that are important to citizens, operators, WRCC, and DOGM.

The chosen topics will fall into one or both of the following categories: environmental protection and customer service. For the environmental protection topics, the team will evaluate whether DOGM assures that offsite mine impacts are prevented and minesite reclamation is successful. For the customer service topics, the team will evaluate the timeliness, accuracy, completeness, and appropriateness of DOGM's responses to complaints and requests for assistance and services.

This agreement remains in effect until revised. Mutually agreed upon this 20th day of May 1998 by the OSM-Utah evaluation team and team coaches.

Team Members

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Pamela Grubaugh-Li

Ranvir Singh (WRCC)

Dennis Winterringer (WRCC)

Team Coaches

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Mary Ann Wright (DOGM)



Charter

of the

State of Utah/Office of Surface Mining Team

for

Evaluation of Utah's

Coal Regulatory Program

(Revised on September 30, 1998)



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INTRODUCTION

In order to foster a shared commitment to the implementation of the Surface Mining Control and Reclamation Act (SMCRA), the Western Regional Coordinating Center (WRCC) of the Office of Surface Mining Reclamation and Enforcement (OSM) and the Utah Division of Oil, Gas and Mining (DOGM) formed an OSM-Utah Evaluation Team (the Team).

MISSION OF THE TEAM

The mission of the Team is to conduct an annual evaluation of Utah's Coal Regulatory Program (the Program) and to make recommendations for improving the administration, implementation, and maintenance of the Program.

THE TEAM

The Team is comprised of a Core Team, Topic Evaluation Teams, and a Compliance Team.

Core Team

Structure

The Core Team consists of three representatives each from WRCC and DOGM. The Team has two Team Co-leaders, one each from WRCC and DOGM, Notetakers, and Members.

Team Co-leader: Role and Responsibilities

At the beginning of each evaluation period, the Core Team will agree which WRCC and DOGM Core Team members will be the Team Co-leaders for the evaluation period. Selection of Team Co-leaders is subject to the concurrence of the DOGM Associate Director of Mining (ADM) and the WRCC Chief of the Denver Field Division (CDFD).

The Team Co-leaders will:

- 1. For alternate Core Team meetings,
 - a. Make arrangements for meeting i.e., establish place, date, and time.
 - b. Compile meeting agenda and distribute the agenda and meeting summary for previous meeting to expected attendees, ADM, and CDFD.
 - c. Facilitate meeting and Team decision making.
- 2. Represent Team in meetings with stakeholders and the public.
- 3. Draft and finalize evaluation agreement (performance agreement).
- 4. Draft and finalize annual evaluation summary report.
- 5. Maintain public access evaluation files as required by Federal (OSM Co-leader) or State law (DOGM Co-leader).

6. As requested, brief OSM upper management (OSM Regional Director and higher) on Team's activities and respond to various requests for information from OSM organizational entities, including Headquarters (OSM Co-leader only).

Team Notetaker: Role and Responsibilities

Team Co-leaders are excluded from serving as Notetakers for Core Team meetings. Each Notetaker will serve for a period of 3 consecutive months. Notetakers will take turns according to the alphabetical order of last names.

The Notetaker will:

- 1. Prepare draft summaries of discussions at each meeting, including decisions made and bases for decisions.
- 2. Distribute draft meeting summaries to attendees for input.
- 3. Revise draft meeting summaries after considering input, if any, from attendees, and provide them to the Core Team Co-leader prior to the next meeting.

Core Team Member: Role and Responsibilities

Core Team members will:

- 1. Participate in determining annual evaluation topics.
- 2. Identify, by names and expertise, Topic Evaluation Team members.
- 3. Brief ADM and CDFD on selection of evaluation topics and Topic Evaluation Team members and obtain their concurrence on them.
- 4. Serve as lead persons in the evaluation of one or more evaluation topics.
- 5. Become knowledgeable about and provide input to the evaluation of each topic (including those topics that the Core Team Member is not involved in evaluating).
- 6. Support and promote the evaluation report conclusions and recommendations to ADM, CDFD, DOGM Director, and WRCC Regional Director.
- 7. Follow up on the implementation of recommendations of the Team.

Topic Evaluation Teams

Structure

1. Topic Evaluation Teams conduct evaluations of topics selected by the Core Team. Each Topic Evaluation team will include a WRCC and DOGM member of the Core Team and, as necessary, other experts from WRCC and DOGM. The Topic Evaluation Teams will adhere to the team ground rules and team operating procedures for consensus decision making. All members of the Topic Evaluation Teams will have equal status. Core Team members will not have more weight than the opinions of non-Core Team Members. No final decision on

evaluation findings and recommendations can be made without the consensus of all members of the Topic Evaluation team and other members of the Core Team.

Topic Evaluation Team Members: Role and Responsibilities

- 1. Be familiar with the Team process.
- 2. Understand and develop an evaluation plan for the evaluation topic.
- 3. Conduct the evaluation of the topic and prepare a report.
- 4. At the end of the evaluation period, brief the entire Core Team and reach consensus with it on evaluation findings and recommendations.
- 5. At the end of the evaluation period, participate in evaluation topic briefings for ADM, CDFD, DOGM Director, and WRCC Regional Director.

Compliance Team

Structure

The Compliance Team will be comprised of a Core Team Member and two other members, one each from WRCC and DOGM.

Compliance Team Members: Role and Responsibilities

The Core Team Member will:

- 1. Compile offsite impact data from sources including minesite evaluations conducted by the Team, WRCC and DOGM joint inspections, and DOGM partial and complete inspections.
- 2. Keep an up-to-date tally of the number and degree of severity (minor, moderate, or major) of offsite impacts.

The Other Compliance Team Members will:

- 1. At the beginning of the evaluation period, recommend to the Core Team the mines to be jointly inspected by WRCC and DOGM.
- 2. Prepare written documentation, which will be entered by the WRCC Team Co-leader in the public access file, of the rationale used in selecting the mines to be inspected.

The DOGM Team member will:

Promptly report to the Core Team Member after each inspection when DOGM issues a notice of violation as a result of offsite impacts.

The Compliance Team will:

- 1. Periodically meet with the Core Team to discuss inspection and enforcement issues.
- 2. At the end of the evaluation period, participate in Compliance Team briefings for ADM, CDFD, DOGM Director, and WRCC Regional Director.

TEAM COACHES

Structure

ADM and CDFD are the coaches for the Team.

Team Coach: Role and Responsibilities

- 1. Provide concurrence with Core Team's selection of Team Co-leaders.
- 2. Provide resources (staff, information, money, and time to consult).
- 3. Be familiar with Team functions.
- 4. Resolve conflicts in accordance with #5 under Team Operating Procedures..
- 5. Clarify organizational priorities and policies.
- 6. Support Team concept by:
 - a. Acknowledging team and its accomplishments,
 - b. Supporting and promoting Team efforts to higher management and outsiders,
 - c. Attending Team meetings as requested, and
 - d. Seeking and considering Team input prior to making decisions on changes in Team members or Team member roles.

TEAM GROUND RULES

Relationship Among Members

- 1. Mutually respect and trust one another.
- 2. Be prepared for meetings.
- 3. Start and end meetings on time.
- 4. Don't talk when another person is talking.
- 5. Avoid side discussions or conversations.
- 6. Reinforce one another positively.
- 7. Avoid prejudging anyone or any idea.
- 8. Discourage talking negatively about absent members.
- 9. No cheap shots.

Member Conduct

1. Participate actively.

- 2. Stay focused on the task at hand.
- 3. Be clear and don't belabor a point.
- 4. Avoid dwelling on issues that cannot be resolved within the scope of Team meeting.
- 5. Discuss a decision outside of the Team only after the Team has finalized it.

Understanding Through Open Discussion

- 1. Seek first to understand, then to be understood listen.
- 2. Share all relevant points on a subject.
- 3. Ask or invite questions for clarification.
- 4. Explain reasons behind statements.
- 5. Leave personal agendas out of the meetings (no hidden agendas).
- 6. Promote discussions on all relevant topics.

TEAM OPERATING PROCEDURES

- 1. In person or through conference call, hold Core Team meetings every month at 9:00 A.M. on the third Wednesday, or as otherwise scheduled.
- 2. Required quorum for a Core Team meeting is two members each from WRCC and DOGM.
- 3. Both Team Co-leaders must be present for a Core Team meeting to be held.
- 4. Make all decisions by consensus. To reach consensus, the Team will explore the interests of each Team member to develop solutions supported by all members. If no consensus can be reached, table the item and go to the next issue.
- 5. If the Core Team cannot reach a consensus decision, use of Vantage's Problem Solving Model (appended) will be considered. If the Core Team is unable to reach a consensus decision after the use of Vantage's Problem Solving Model, CDFD and ADM will be requested to participate in the decision making.
- 6. Decisions may be revisited.
- 7. Conduct meetings according to the written agenda.
- 8. Hold a minimum of three meetings with ADM and CDFD- one at the beginning, one at the mid-term, and one at the end of the evaluation period.
- 9. Review Team Charter and Evaluation Agreement in the beginning of each evaluation period and make necessary revisions by consensus of all Core Team members.
- 10. At the end of the evaluation period, the Core Team, along with ADM and CDFD, will make a presentation to the WRCC Regional Director and the DOGM Director on the final evaluation summary report.

APPENDIX

Vantage Human Resource Services' Problem-Solving Model

- 1. <u>Clarify the Goal</u>: Start by clarifying the goal-what you're trying to accomplish, so that all group members are working toward the same goal.
- 2. <u>Define and Limit the Problem:</u> Narrow the focus of the problem to ensure that it is specific and manageable.
- 3. <u>Gather Data and Analyze the Problem:</u> Identify the history and root cause, who is affected, the effect the problem is having, and other related data. Include many perspectives.
- 4. <u>Establish Criteria for Possible Solutions:</u> Determine the minimum criteria that any viable solution must meet. Look at considerations such as organizational boundaries, scope of the group's authority, resource limitations, and laws and regulations. When appropriate, prioritize the criteria.
- 5. <u>Identify all Possible Solutions:</u> In a non-judgmental manner, generate as many ideas as possible. Wild ideas are to be encouraged, as they could be more feasible than originally "assumed", or could serve an inspiration for the best solution.
- 6. Evaluate Possible Solutions and Select the Best: Evaluate all possible solutions against the criteria the group identified in Step 4. Avoid assumptions or evaluations based on the past...."We tried that before and it didn't work." "The boss won't let us do that."
- 7. <u>Plan For and Implement the Solution:</u> Design the process and procedures for implementing the group's solution. Allocate resources and assign responsibilities to group members. Develop measurements of "success."
- 8. Evaluate the Solution: Always build in an evaluation of the solution. Decide when the process by the group will decide if the solution is meeting the original intent. Be willing to modify as problems are identified.
- 9. Celebrate Your Success.

OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT

Annual Evaluation Summary Report

for the

Regulatory Program

Administered by the State

of

Utah

for

Evaluation Year 1998

(October 1, 1997, through September 30, 1998)

January 1999

UTAH PROGRAM EVALUATION TEAM FOR 1998



Left to Right

Front Row: Ranvir Singh (OSM), James Fulton (OSM, Team Coach), Mary Ann

Wright (DOGM, Team Coach), Pamela Grubaugh-Littig (DOGM)

Middle Row: Michael Rosenthal (OSM), Dennis Winterringer (OSM), Sharon Falvey

(DOGM), Ron Sassaman (OSM)

Back Row: Joe Helfrich (DOGM), Ken Wyatt (DOGM), Henry Austin (OSM), Daron

Haddock (DOGM), Randy Harden (DOGM)

UTAH PROGRAM EVALUATION CORE TEAM FOR 1998



Left to Right

Front Row: Ranvir Singh (OSM), Dennis Winterringer (OSM), Pamela Grubaugh-

Littig (DOGM)

Back Row: Daron Haddock (DOGM), Ron Sassaman (OSM), Randy Harden (DOGM)

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I. <u>Introduction</u>

The Surface Mining Control and Reclamation Act of 1977 (SMCRA) created the Office of Surface Mining Reclamation and Enforcement (OSM) in the Department of the Interior. SMCRA provides authority to OSM to oversee the implementation of and provide Federal funding for State regulatory programs that have been approved by OSM as meeting the minimum standards specified by SMCRA. This report contains summary information regarding the Utah Program and the effectiveness of the Utah program in meeting the applicable purposes of SMCRA as specified in section 102. This report covers the period of October 1, 1997, through September 30, 1998. Detailed background information and comprehensive reports for the program elements evaluated during the period are available for review and copying at the OSM Denver Field Division office.

II. Overview of the Utah Coal Mining Industry

Coal is found beneath approximately 18 percent of the state of Utah, but only 4 percent is considered minable at this time. The demonstrated coal reserve base is about 6.4 billion tons, which is 1.3 percent of the national reserve base. Most of Utah's coal resources are held by the Federal government and Indian tribes.

The coal fields are divided into the Northern, Central, Eastern, and Southwestern Utah Coal Regions. The most productive region is the Central Utah Coal Region, which includes the Book Cliffs, Wasatch Plateau, and Emery Coal Fields. There are vast, substantially undeveloped coal fields in the Southwestern Utah Coal Region.

Most of the coal is bituminous and is of Cretaceous age. The Btu value is high compared to most other western States. Sulfur content ranges from medium to low in the more important coal fields.

Coal production steadily increased from the early 1970's and peaked in 1996 at almost 29 million tons. Production in 1997 declined to approximately 26 million tons (table 1). The majority of the coal production is produced by underground mining operations, which mostly mine seams exceeding 8 feet in thickness.

Currently, there are 28 permitted operations (table 2) that have thus far disturbed 2,529 acres (table 2). Utah considers each of these operations to be an inspectable unit. Of these 28 operations, 27 are active or temporarily inactive, 1 is inactive, and none are abandoned (table 2). Of the 27 active or temporarily inactive operations, 9 are underground mines that use the longwall mining method, 13 are underground mines that use the room-and-pillar mining method (1 of these mines has a permitted loadout facility at the minesite, and 1 other is a surface mine extracting coal from a coal mine waste pond), 1 is a surface mining operation extracting coal from an underground mine refuse pile, and 4 are loadout facilities (1 of these facilities also has a surface mining operation extracting coal from a coal mine waste pond).

Utah's coal industry has a significant impact on the local economies where mining occurs. According to the Utah Governor's Office of Planning and Budget, Demographic and Economic Analysis Section, coal mining in 1997 employed 2,315 persons in the State. In the three counties where most of the coal mining occurs, all types of mining employed 2442 persons (1141 in Carbon County; 956 in Emery County; and 345 in Sevier County).

The climate of the Central Utah Coal Region is characterized by hot, dry summers and cold, relatively moist winters. Normal precipitation varies from 6 inches in the lower valleys to more than 40 inches on some high plateaus. The growing season ranges from 5 months in some valleys to only 2 ½ months in mountainous regions. These extreme climatic conditions make reclamation a challenge.

III. Overview of the Public Participation Opportunities in the Oversight Process and Utah Program

A. Oversight Process

On April 16, 1998, the OSM/Utah oversight team participated in a Utah Division of Oil, Gas and Mining (DOGM) stakeholder's meeting. Thirty-five persons attended this meeting, which served as a forum for interested public and private parties to learn about and provide input on DOGM activities for coal, oil and gas, and other mineral regulatory programs.

The team described a multi-year agreement between OSM and DOGM on how program evaluations will be conducted. (A copy of this agreement is on the OSM Internet homepage at www.osmre.gov/pautah.) It also identified the following five topics that the team intended to review this evaluation year: surface and ground water protection, bonding practices, highwall elimination and retention as a part of approximate original contour restoration, permitting of coal mine access and haul roads, and customer service with respect to the Applicant/Violator System.

The team offered copies of the 1997 annual evaluation report to anyone who was interested in obtaining a paper copy and identified the location on the DOGM Internet homepage where the report is accessible (www.nr.state.ut.us/ogm/osmrpt97). (The report is also accessible on the OSM Internet homepage at www.osmre.gov/report97).

The team did not receive any oral or written comments in response to its request for comments on the oversight process, recommendations for additional review topics, and suggestions for improvements for future annual evaluation reports.

B. <u>Utah Program</u>

In Castle Dale, Utah, on November 13, 1997, the Hydrology Outreach Committee held a forum entitled "Multiple Uses of Water in Emery and Carbon Counties" that was attended by

175 persons. The Committee describes itself as "a consortium of local, State and Federal government, consultants and industry representatives examining the interrelationships of water and mining, and promoting cooperation among water users." OSM, in connection with the 20th anniversary observance of the enactment of SMCRA, took the opportunity to give the Emery County Public Lands Council a Grassroots Organization award. OSM lauded the Council's work on water issues in the Huntington Canyon area in the western portion of Utah's Wasatch Plateau coalfield and cited the "the Council's importance as a venue for citizens to work in partnership with federal and State agencies."

In St. George, Utah, on March 10 and 11, 1998, the Hydrology Outreach Committee had a booth at the Water User's Conference. The Committee displayed information and answered questions on hydrology topics in the Emery County area.

In Price, Utah, on March 19, 1998, DOGM participated in a conference entitled "Utah Coal Conference for Government and Industry". Of the 73 persons that attended, 36 were governmental employees, 26 were from the coal industry, and 10 were consultants.

IV. Accomplishments, Issues, and Innovations

A. Accomplishments

In their evaluation of two topics in evaluation year 1998, OSM and DOGM identified the following accomplishments. Because DOGM is successfully implementing the parts of its OSM-approved program relating to these topics, OSM and DOGM will not be further examining them in evaluation year 1999.

1. Surface and Ground Water Protection

Water monitoring data analyses. During evaluation years 1996 and 1997, OSM and DOGM analyzed water monitoring data for one mine in response to allegations by water user associations that the mine was adversely impacting water resources outside of the permit area. By the end of evaluation year 1997, OSM and DOGM found that flow at one spring was lower than historic observations and recommended that this quantity issue be further examined to better determine if the reduced flows were the result of mining.

In evaluation year 1997, Utah developed Technical Directive Tech-005, which details the State's administrative process for "Review and Interpretation of Water Monitoring Data." The purpose of the directive is to supplement existing procedures and State regulation related to the processing of water monitoring data for both the development of cumulative hydrologic impact assessment findings documents and for the evaluation of water monitoring data gathered during mining.

At approximately the midpoint of evaluation year 1998, the OSM and DOGM team decided

that it would discontinue reviewing water quality and quantity data to determine whether impacts to the hydrologic balance were occurring. It made this decision on the bases that (1) it had not identified any significant hydrologic impacts that were attributable to the mine and (2) DOGM had developed a well-defined administrative process in Tech Directive Tech-005 that requires DOGM to continue to review and interpret the mine's water monitoring data and to make decisions on the mine's impacts to the hydrologic balance.

Cumulative hydrologic impact assessments (CHIA's). In evaluation year 1997, OSM and DOGM reviewed DOGM's September 1989 Gentry Mountain CHIA. In the CHIA, DOGM had assessed the cumulative impacts of the aforementioned mine and additional mines adjacent to it. OSM and DOGM found that DOGM had not adequately specified in this CHIA the standards that, if exceeded, would constitute material damage to the hydrologic balance outside the permit area.

DOGM began revision of the CHIA in evaluation year 1997 and completed it in September 1998. In the revised CHIA, DOGM evaluated material damage on the basis of the use of the water resource and the water quality standards associated with the use. In so doing, it worked within the framework of State water rights law and State water quality standards. DOGM succeeded in developing a rational set of site-specific material damage standards for the mine.

2. Bonding Practices

As a part of an OSM regional review of western State bonding practices, OSM and DOGM evaluated DOGM's bonding practices to determine whether DOGM was inappropriately reducing reclamation performance bonds without going through the formal bond release process. Section 509(e) of SMCRA and the Federal regulations at 30 CFR 800.15(c) allow bond reductions outside the formal bond release process only in those instances where the acreage to be affected decreases or where the permittee's method of operation or other circumstances reduces the estimated cost for the regulatory authority to reclaim the bonded area. OSM and DOGM reviewed all of the bond adjustments that DOGM made for a 9-month period and found that Utah was appropriately reducing bonds.

B. Issues

In their evaluation of four topics, OSM and DOGM identified the following issues. With one exception (Applicant/Violator System), OSM and DOGM will continue their evaluation of the following topics in evaluation year 1999.

1. <u>Utah Interagency Water Quality Agreement</u>

As the result of their review of citizen complaints during evaluation year 1996, OSM and DOGM concluded that communication on water quality problems at coal mines could be improved between DOGM and the Utah Department of Environmental Quality (DEQ), the

Utah Pollutant Discharge Elimination System permitting authority. During evaluation year 1997, OSM and DOGM further concluded that the October 16, 1990, memorandum of understanding (MOU) between DOGM and DEQ does not promote effective communication for enforcing water quality standards at coal mines because:

- the MOU lacks a provision that requires DEQ to inform DOGM when DEQ becomes aware of a violation of the Utah Pollutant Discharge Elimination System permit or of the water quality standards at 40 CFR Part 434, and
- although DOGM continues to cite water quality violations, the MOU lacks specificity
 as to which agency is responsible for issuing violation notices when reports and
 inspections justify such actions.

During evaluation year 1998, DOGM transmitted proposed MOU revisions to DEQ.

2. <u>Highwall Elimination and Retention As a Part of Approximate Original Contour (AOC) Restoration</u>

During evaluation year 1997, DOGM expended considerable effort to prepare a detailed inventory of the 97 highwalls in the State. The inventory serves as a useful compendium of information on reclamation requirements and plans for each of the highwalls. In using the highwalls inventory, OSM and DOGM identified deficiencies in highwall reclamation plans in one-fifth of the mine permits.

In evaluation year 1998, DOGM developed a prioritized schedule for the permittees to submit proposed permit revisions to correct the deficiencies and for DOGM to review the proposals. The permit revision due dates ranged from August 1998 to February 2000. By letters dated March 3 and 5, 1998, DOGM notified each of the permittees of the permit revision submission deadlines.

OSM and DOGM agreed that they would (1) track the permit revision submission dates and DOGM permit revisions review dates to determine whether the schedule was being adhered to and (2) to review the revised permits to verify that the permit deficiencies where being resolved in accordance with the requirements of the Utah regulatory program.

3. Permitting of Coal Mine Access and Haul Roads

On July 3, 1995, DOGM sent to OSM a letter which included policy statements on the permitting of public roads. OSM agreed with the policy clarification and terminated a proceeding under 30 CFR Part 733 to substitute Federal enforcement for that part of the State program concerning the permitting of coal mine access and haul roads.

In its policy letter, DOGM indicated that an access or haul road may not be required to be

permitted if (1) it was properly acquired by the governmental entity (not deeded to avoid regulation), (2) it is maintained with public funds or in exchange for taxes or fees, (3) it was constructed in a manner similar to other public roads of the same classification, and (4) impacts from mining are not significant under the definition of "affected area" and "surface coal mining operations."

During evaluation year 1997, OSM and DOGM reviewed a permit that DOGM had issued during that year to determine whether DOGM was implementing its July 3, 1995, permitting policy. OSM and DOGM concluded that DOGM did not comply with the policy because, in deciding not to require a road to be permitted, DOGM did not make written findings on the last three criteria cited above.

In evaluation year 1998, DOGM wrote for this permit the findings for the three criteria. For an additional permit that it issued and another permit application that it was processing, DOGM wrote findings for all four criteria.

4. Applicant/Violator System (AVS)

Section 510(c) of SMCRA requires a regulatory authority such as DOGM to not issue a permit if any surface coal mining operation owned or controlled by a permit applicant is in violation of SMCRA or any other environmental law in connection with a surface coal mining operation. The only exception to this requirement is if the permit applicant submits proof that such violation has been corrected or is in the process of being corrected. As a means of tracking such violations, OSM developed the computerized AVS.

In an evaluation of DOGM's effectiveness in providing customer service, OSM and DOGM reviewed DOGM's use of AVS. In so doing, OSM and DOGM enlisted the assistance of OSM's Lexington, Kentucky AVS office, which is responsible for maintaining the system.

Under a March 21, 1991, MOU between OSM and DOGM, DOGM agreed (1) to enter into AVS permit, violation, and ownership and control information for its permittees and (2) to use AVS in making decisions on whether to issue permits. In additional memoranda and guidance documents, OSM's AVS office set specific data entry standards (timeliness, information accuracy, and information completeness) and procedures to follow in querying AVS and obtaining the OSM AVS office's manual authorization prior to a regulatory authority issuing a permit.

In their evaluation, OSM and DOGM found that DOGM accurately entered violation and permit information into AVS but that in two instances DOGM did not enter violation information into AVS within the time frames set forth in the OSM AVS memoranda and guidance documents. They also found that in four of six instances DOGM followed the permit issuance procedures but that in two instances DOGM queried AVS but did not receive the OSM AVS office's manual authorization prior to issuing the permits.

These shortcomings were minor in that DOGM did not issue any permits that it should not have. They were the result of Utah's relative unfamiliarity with the system, which was a consequence of its infrequent need to use it. OSM and DOGM evaluators recommended that DOGM remind its AVS users of the MOU, memoranda, and guideline standards.

C. Innovations

For the third consecutive year, persons from OSM and DOGM continued to work as a team to evaluate and assist DOGM in the administration, implementation, and maintenance of the approved Utah regulatory program. During the evaluation year, the team consisted of 12 program and permitting specialists, scientists, and managers from OSM and DOGM. On March 11 and 12, 1998, the team participated in a team building and training exercise that was led by a human resources consultant. The team clarified its goals and functions and renewed its commitment to effectively work together to improve the Utah regulatory program.

DOGM developed a computerized water quantity and quality database, which is accessible on the Internet at http://hlunix.hl.state.ut.us/cgi-bin/appx-ogm.cgi to anyone who has an interest in the data for a specific mine. Targeted users include such groups as concerned citizens, mine permittees, State and Federal agencies, DOGM staff, and OSM. DOGM is developing an electronic permitting system that will among other things allow mine permittees to electronically submit surface and ground water sampling data for the database. DOGM's electronic access to the water data facilitates its review of permits, preparation of CHIA's, and evaluation of citizen water complaints. The computerized system enables citizens to quickly and easily access water quality and quantity data for the mines they are concerned about.

The electronic permitting system will allow mining companies to electronically retrieve formats for permit applications, to submit permit applications, and to access permit application and permit information such as DOGM technical analyses, probable hydrologic consequences analyses, and CHIA's.

V. Success in Achieving the Purposes of SMCRA

To further the concept of reporting end results and measuring Utah's success in achieving the purposes of SMCRA, OSM and DOGM conducted evaluations whose purpose was to measure the number and extent of offsite impacts, the number of acres that have been mined and reclaimed and meet the bond release requirements for the various phases of reclamation, and DOGM's effectiveness of customer service. Individual topic reports, which provide additional details on how OSM and DOGM conducted the evaluations and took the measurements, are available in the OSM Denver Field Division office.

A. Offsite Impacts

Table 4 shows the number and type of offsite impacts that OSM and DOGM documented as

having occurred during the evaluation year.

For minesites or facilities where DOGM had not forfeited reclamation performance bonds, OSM and DOGM found six separate incidents where mines or facilities caused offsite impacts. One of these incidents resulted in impacts to more than one type of resource (i.e., one incident caused hydrologic impacts to land and water resources). Therefore, table 4 (top half) shows a total of seven impacts. Of these seven impacts, five were impacts to hydrology resources. All of these hydrology impacts were minor in degree. Although five of the seven were impacts to hydrology resources, there is no pattern that suggests a deficiency in the way that Utah is implementing the hydrologic protection provisions of its regulatory program.

These seven impacts occurred at five different mines or facilities. Therefore, for evaluation year 1998, 82 percent of the permitted operations (23 of 28 permitted operations) were free of offsite impacts. This is a lower percentage than evaluation year 1997 when OSM and DOGM found that 87 percent of the permitted operations (26 of 30) were free of offsite impacts. There probably is no significance to this lower percentage for evaluation year 1998 because there was only one more mine or facility that had offsite impacts in evaluation year 1998 than in evaluation year 1997 (five versus four).

The low total number of observed offsite impacts at nonforfeiture sites is an indication that Utah is effective there in preventing offsite impacts to water, people, land, and man-made structures.

OSM and DOGM compiled this offsite information for nonforfeiture sites from 344 on-the-ground observations they made. These observations included 5 OSM and DOGM joint, complete inspections; 130 DOGM complete inspections; and 209 DOGM partial inspections. In addition to these on-the-ground observations, OSM conducted nonfield reviews of the topics of surface and ground water protection and roads permitting with the intent of determining whether offsite impacts were occurring. As discussed in section IV.A.1 above, OSM and DOGM did not identify any significant offsite impacts to surface and ground water resources that were caused by the mine they evaluated. As discussed in section IV.B.3 above, OSM and DOGM continue to discuss roads permitting for three mines. During these ongoing discussions, OSM and DOGM did not assess whether these roads were causing offsite impacts.

OSM and DOGM are not aware of any offsite impacts that occurred at bond forfeiture sites (bottom half of table 4), although they did not conduct any on-the-ground evaluations to confirm this. OSM and DOGM intend to conduct such evaluations at bond forfeiture sites during evaluation year 1999.

B. Reclamation Success

The measure of reclamation success that OSM and DOGM used in evaluation year 1998 was permanent program disturbed acreage that had received bond release. Historically, the amount

of bond release acreage in Utah has been very low due to the following two factors.

- Of Utah's 28 permitted operations, 23 are underground mines (table 2). Most of these underground mining operations are long-lived, and the surface disturbances for them are relatively small and remain active during the entire life of the mining operations because of their continued use as surface facilities.
- The 10-year minimum bond liability period and extreme climatic conditions make revegetation difficult.

Table 5 shows the acreage released partially (phases I and II) or totally (phase III) from bond during the evaluation year. Of the 2,605 acres of total disturbance that had not yet received final (phase III) bond release at the beginning of the evaluation year, DOGM did not grant any phase I or II bond releases, but it did grant phase III bond releases for 123 acres of permanent regulatory program disturbances and terminated jurisdiction on 40 acres of initial regulatory program disturbances.

During the 17 years since OSM originally approved Utah's program, six phase III bond releases have occurred. Four of these six releases occurred during evaluation year 1998. To celebrate the bond releases at two of these minesites, DOGM on June 16, 1998, led an afternoon tour of one of them and participated in an evening bond release ceremony that was attended by one of the landowners, industry, OSM, the Bureau of Land Management, and the U.S. Forest Service. DOGM received favorable publicity about the mine tour and successful minesite reclamation in a <u>Salt Lake Tribune</u> newspaper article.

In addition to this analysis of bond release acreage, OSM and DOGM, as described in section IV.B.2, also assessed reclamation success in its evaluation of highwall reclamation. In evaluation year 1997, OSM and DOGM found that, with respect to approximate original contour restoration, minesite reclamation on a portion of one mine, and possibly two others, will not be entirely successful because highwalls and cut-slopes created there after May 3, 1978, will not be completely eliminated. Also, as described in section IV.B.2, approximately one-fifth of the permits have reclamation plan deficiencies concerning highwall reclamation. Until the permittees revise their permits to resolve these deficiencies, OSM and DOGM will not be able to fully assess the degree of success of highwall reclamation in the State.

C. <u>Customer Service</u>

As described in section IV.B.2, OSM and DOGM evaluated DOGM's bonding practices to determine whether it was inappropriately reducing reclamation performance bonds without going through the formal bond release process. Certain bond reductions would be inappropriate if a State did not include landowner and public notification of proposed bond reductions, which are provided for in the formal bond release process. OSM and DOGM found that DOGM was not engaging in this type of inappropriate activity.

As discussed in section IV.B.1, OSM and DOGM found as a result of their citizen complaint evaluations that a water quality MOU between DOGM and Utah DEQ did not promote effective communication on water quality enforcement. Ultimately, this ineffective communication could lead to disservice of two of DOGM's primary customers: citizens who may be affected by water quality noncompliances and mining companies that are responsible for resolving noncompliances. DOGM has initiated with Utah DEQ discussions that should yield MOU revisions which will have positive impacts for customer service.

As described in section IV.B.4, OSM and DOGM evaluated DOGM's use of AVS. Minor, easily correctable lapses in using the computerized system did not lead to DOGM issuing any permits that it should not have. As a result, there are no negative impacts to any citizens that may have had concerns about the permits. Likewise, there were no negative impacts to mining companies that would have been affected if permits would have had to be temporarily rescinded.

VI. OSM Assistance

For the 1-year grant period starting July 1, 1998, OSM funded the Utah program in the amount of \$1.50 million (table 8). Through a Federal lands cooperative agreement, OSM reimburses DOGM for permitting, inspection, and other activities that it performs for mines on Federal lands. Because most of the mines in Utah occur on Federal lands, the percentage of total program costs for which OSM provided funding was high (85.5 percent, table 8).

In September 1998, OSM augmented this grant money with an additional \$20,000. DOGM will use this money to hire a hydrogeology consultant to conduct a spring diminution study at the mine discussed in section IV.A.1. DOGM, the U.S. Forest Service, one of the mining companies, and local water user organizations are also providing funding for this project.

In evaluation year 1997, OSM entered into a memorandum of agreement with DOGM that gave DOGM \$6960 to buy computer hardware and software for the water quantity and quality database and the electronic permitting system that are discussed in section IV.C. In evaluation year 1998, OSM gave DOGM an additional \$15,171 for these projects.

OSM made available to DOGM the services of a human resources consultant who is under contract to OSM. In July 1998, the consultant provided DOGM with 2 days of training on teamwork. The cost to OSM for these services was \$4717.

Under its Technical Training Program and Technology Transfer Program, OSM offers free of charge a variety of courses, workshops, and forums to State and Tribal employees. During the evaluation year, six DOGM employees attended the following Technical Training Program courses: Spoil Handling and Disposal, Surface and Ground Water Hydrology, Evidence Preparation and Testimony, Soils and Revegetation, and Applied Engineering Principles. During the evaluation year, 18 DOGM employees attended the following Technology Transfer

Program workshop and forums: Statistical Sampling for Baseline Studies, Bond Release and Monitoring Studies Workshop; Topics in Statistical Analysis for Environmental Monitoring Associated with the Surface Mining Control and Reclamation Act; Advanced Statistical Methods for Bond Release in Arid and Semi-Arid Regions; and Interactive Forum on Approaching Bond Release: Applied Statistics for Reclamation and Surface Mining Applications in the Arid, Semi-Arid West.

VII. Oversight Topic Reviews

In the time period from October 1, 1997, through September 30, 1998, OSM and DOGM evaluated the following topics: surface and ground water protection, bonding practices, interagency water quality MOU, highwall elimination and retention as a part of AOC restoration, permitting of coal mine access and haul roads, and use of AVS. Written reports for all of these topics are available for review in the OSM Denver Field Division office.

Appendix. Tabular Summary of Core Data Characterizing the Utah Program

The following tables present data pertinent to mining operations and State and Federal regulatory activities within Utah. They also summarize Utah staffing and OSM funding. Unless otherwise specified, the reporting period for the data contained in all tables is October 1, 1997, to September 30, 1998.

TABLE 1

COAL PRODUCTION^A (Millions of short tons)

Period	Surface mines	Underground mines	Total
1995	0.43	25.73	26.16
1996	0.85	28.09	28.94
1997	0.61	25.79	26.40

^ACoal production as reported in this table is the gross tonnage which includes coal that is sold, used or transferred as reported to OSM by each mining company on form OSM-1 line 8(a). Gross tonnage does not provide for a moisture reduction. OSM verifies tonnage reported through routine auditing of mining companies. This production may vary from that reported by States or other sources due to varying methods of determining and reporting coal production.

TABLE 2

INSPECTABLE UNITS As of September 30, 1998 Number and status of permits Inactive Coal mines Disturbed acreage Active or and related temporarily **Totals** Abandoned Phase II facilities inactive bond release Insp Unit IP PP ΙP IP PP ПР PP ΤP PP Total STATE and PRIVATE LANDSA REGULATORY AUTHORITY: UTAH Surface mines 202 202 Underground mines 6 106 106 Other facilities 516 516 **Subtotals** 824 824 FEDERAL LANDSB **REGULATORY AUTHORITY: UTAH** Surface mines Underground mines 17 17 1624 1624 Other facilities 81 **Subtotals** 19 1705 1705 **ALL LANDS** Surface mines 202 202 Underground mines 22 23 1730 1730 Other facilities 597 597 27 **Totals** 2529 2529 Average number of permits per inspectable unit (excluding exploration sites) Number of exploration permits on State and private lands: On Federal lands: Number of exploration notices on State and private lands: On Federal lands: P: Initial regulatory program sites. PP: Permanent regulatory program sites. A Mines or facilities where entire disturbed area occurs on State and/or private lands. Mines or facilities where at least a portion of the disturbed area occurs on Federal lands. Inspectable Units includes multiple permits that have been grouped together as one unit for inspection frequency purposes by some State programs.

TABLE 3

UTAH PERMITTING ACTIVITY As of September 30, 1998

Type of	Surface mines		Underground mines		Other facilities		Totals					
application	App. Rec.	Issued	Acres	App. Rec.	Issued	Acres ^A	App. Rec.	Issued	Acres	App. Rec.	Issued	Acres
New permits				2	1	30				2	1	30
Renewals		i:		3	2	243				3	2	243
Amendments		i		1	1	$0_{\mathbf{B}}$				1	1	0в
Incidental boundary revisions				2	0	490		:		2	0	490
Revisions (exclusive of incidental boundary revisions)				63	55					63	55	
Transfers, sales and assignments of permit rights				3	3					3	3	
Small operator assistance				0	0					0	0	
Exploration permits				3	3					3	3	
Exploration notices ^C				3	0					3	0	
Totals				80	65	763				80	65	763

Number of midterm permit reviews completed that are not reported as revisions 6

 $^{^{}m A}$ Includes only the number of acres of proposed surface disturbance.

Amendments (significant permit revisions) added 320 acres to permitted acreage but none to disturbed surface acreage (i.e., all proposed disturbance was underground).

State approval not required. Involves removal of less than 250 tons of coal and does not affect lands designated unsuitable for mining.

TABLE 4

	OFFSITE IMPACTS ON SIT	PACT	S ON S	TES W	THERE	ES WHERE BONDS HAVE NOT BEEN FORFEITED	HAVE	NOT	BEEN FO	ORFEI	TED		
RESOL	RESOURCES AFFECTED		People			Land			Water			Structures	S
DEG	DEGREE OF IMPACT	mino r	moderate	major	minor	moderate	тајог	minor	moderate	major	minor	moderate	major
TYPE OF	Blasting												
IMPACT	Land Stability												
AND TOTAL	Hydrology				3			3					
NUMBER OF	Encroachment												
EACH TYPE	Other				1								
	Total				4			3					
	OFFSITE IMPACTS ON SI	MPA	CTS ON		WHE	TES WHERE BONDS HAVE BEEN FORFEITED	DS HA	VE BEI	EN FOR	FEITE	0		
RESOU	RESOURCES AFFECTED		People			Land		,	Water			Structures	70
DEGF	DEGREE OF IMPACT	mino	moderate	major	minor	moderate	major	minor	moderate	major	minor	moderate	major
TYPE OF	Blasting												
IMPACT	Land Stability												
AND TOTAL	Hydrology												
EACH TYPE	Encroachment												
	Other												

Total

TABLE 5

ANNUAL STATE MINING AND RECLAMATION RESULTS

Bond release phase	ppcubic perior mance standard			
Phase I	Approximate original contour restored	0		
Phase II	 Topsoil or approved alternative replaced Surface stabilized Vegetation established 	0		
Phase III	 Postmining land use/productivity restored Vegetation successfully and permanently established Groundwater recharge, quality, and quantity restored Surface water quality and quantity restored 	123 ^{A, B}		
	Bonded acreage status	Acres		
Total number of bonded acres at end of last evaluation year (September 30, 1997) ^c		2605		
Total number of bonded acres at the end of this evaluation year (September 30, 1998) ^c		2529		
Number of a are bonded to	acres at the end of this evaluation year that for remining	0.00		
Number of this evaluat	acres where bond was forfeited during ion year	0.00		

A The acreage receiving bond release was low owing to (1) most of the operations being long-lived underground mines with relatively small surface disturbances that remain active during the entire life of the mining operations and (2) a 10-year minimum bond liability period and extreme climatic conditions that make revegetation difficult.

^B Not included in this total is 40 acres of initial regulatory program disturbance on which DOGM terminated jurisdiction.

^C Bonded acreage in this category is that disturbed acreage that had not received a phase III bond release.

TABLE 6

STATE BOND FORFEITURE ACTIVITY (Permanent Program Permits)

			,
	Sites	Dollars	Acres
Bonds forfeited as of September 30, 1997 ^A	1	1,888,000	289 ^B
Bonds forfeited during EY 1998	0		
Forfeited bonds collected as September 30, 1997 ^A	1	1,888,000	289 ^B
Forfeited bonds collected during EY 1998	0		
Forfeiture sites reclaimed during EY 1998	0	С	
Forfeiture sites repermitted during EY 1998	0		
Forfeiture sites unreclaimed as of September 30, 1998	1		289 ^B
Excess reclamation costs recovered from permittee	0		
Excess forfeiture proceeds returned to permittee	0		i

A Includes data only for those forfeiture sites not fully reclaimed as of this date.

^B Disturbed acres.

^C Cost of reclamation, excluding general administrative expenses.

TABLE 7

UTAH STAFFING (Full-time equivalents at end of evaluation year)

Function	EY 1998
Regulatory Program	
Permit review	15.0
Inspection	6.0
Program administration	3.0
Total	24.0

TABLE 8

FUNDS GRANTED TO UTAH BY OSM (Millions of dollars)

Type of grant	Federal funds awarded	Federal funding as a percentage of total program costs
Administration and enforcement	1.50	85.5
Small operator assistance	0.00	0.0
Total	1.50	

OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT

Annual Evaluation Summary Report

for the

Regulatory Program

Administered by the State

of

Utah

for

Evaluation Year 1999

(October 1, 1998, through September 30, 1999)

November 1999

UTAH PROGRAM EVALUATION TEAM FOR 1999



Pictured left to right.

Front row: Pamela Grubaugh-Littig (Utah Division of Oil, Gas and Mining (DOGM)), Ranvir Singh (Office of Surface Mining (OSM)), Michael Rosenthal (OSM), and Dennis Winterringer (OSM).

Back row: James Fulton (OSM, Team Coach), Mary Ann Wright (DOGM, Team Coach), Randall Harden (DOGM), and Daron Haddock (DOGM).

Not pictured.

Henry Austin (OSM) and Ronald Sassaman (OSM).

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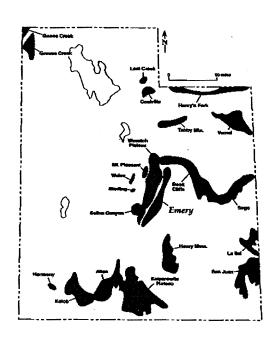
Appendix. Tabular summary of core data characterizing the program

I. Introduction

The Surface Mining Control and Reclamation Act of 1977 (SMCRA) created the Office of Surface Mining Reclamation and Enforcement (OSM) in the Department of the Interior. SMCRA provides authority to OSM to oversee the implementation of and provide Federal funding for State regulatory programs that have been approved by OSM as meeting the minimum standards of SMCRA. This report contains summary information regarding the Utah Program and the effectiveness of the Utah program in meeting the applicable purposes of SMCRA as specified in section 102. This report covers the period of October 1, 1998, through September 30, 1999. Detailed background information and comprehensive reports for the program elements evaluated during the period are available for review and copying at the OSM Denver Field Division office.

II. Overview of the Utah Coal Mining Industry

Coal is found beneath approximately 18 percent of the state of Utah, but only 4 percent is considered minable at this time. The demonstrated coal reserve base is about 6.4 billion tons, which is 1.3 percent of the national reserve base. Most of Utah's coal resources are held by the State and Federal governments and Indian tribes.



Utah coal fields are shown on the figure to the left (Utah Geological Survey, "Survey Notes", September 1998). In 1997, only the Wasatch and Book Cliffs coal fields were being actively mined. These coal fields respectively accounted for 86.7 and 13.3 of the total 1997 production (Utah Department of Natural Resources, Office of Energy and Resource Planning, "1997 Annual Review and Forecast of Utah Coal Production and Distribution", September 1998).

Most of the coal is bituminous and is of Cretaceous age. The Btu value is high compared to most other western States. Sulfur content ranges from medium to low in the more important coal fields.

Coal production steadily increased from the early 1970's and peaked in 1996 at almost 29 million tons. Production in 1998 was approximately 27.5 million tons (table 1). The majority of the coal production is produced by underground mining operations, which mostly mine seams exceeding 8 feet in thickness.

Currently, there are 29 permitted operations (table 2) that have thus far disturbed 2,349 acres (table 2). Utah considers each of these operations to be an inspectable unit. Of these 29 operations, 28 are active or temporarily inactive, 1 is inactive, and none are abandoned (table 2). Of the 28 active or temporarily inactive operations, 10 are underground mines that use the longwall mining method, 13 are underground mines that use the room-and-pillar mining method (1 of these mines has a permitted coal preparation plant/loadout facility at the minesite, and 1 other has a permitted coal preparation plant/loadout facility and a surface mining operation extracting coal from a coal mine waste pond), 1 is a surface mining operation extracting coal from an underground mine refuse pile, and 4 are coal preparation plants/loadout facilities (1 of these facilities also has a surface mining operation extracting coal from a coal mine waste pond).

Utah's coal industry has a significant impact on the local economies where mining occurs. The State of Utah projected that coal mining would employ 2,341 persons in 1998 (Utah Governor's Office of Planning and Budget, Demographic and Economic Analysis Section, Internet web site). In the three counties where the coal mining occurs, it projected that all types of mining would employ 2,417 persons (1,132 in Carbon County; 948 in Emery County; and 337 in Sevier County).

The climate of the Wasatch and Book Cliffs coal fields is characterized by hot, dry summers and cold, relatively moist winters. Normal precipitation varies from 6 inches in the lower valleys to more than 40 inches on some high plateaus. The growing season ranges from 5 months in some valleys to only 2 ½ months in mountainous regions. These extreme climatic conditions make reclamation a challenge.

III. Overview of the Public Participation Opportunities in the Oversight Process and Utah Program

A. Oversight Process

On April 21, 1999, the OSM/Utah oversight team participated in a Utah Division of Oil, Gas and Mining (DOGM) stakeholder's meeting. Thirty-one persons attended this meeting, which served as a forum for interested public and private parties to learn about and provide input on DOGM activities for coal, oil and gas, and other mineral regulatory programs.

The team members described OSM's goals for all SMCRA State regulatory programs: implementation of citizen participation and other procedural requirements of the programs (customer satisfaction), prevention of offsite impacts at all mines, and successful, onsite reclamation at all mines. They identified the following topics that the team intended to review this evaluation year: development of memorandum of understanding between DOGM and the Utah Department of Environmental Quality on water quality violations at minesites (customer satisfaction), timeliness of permitting actions (customer satisfaction), surface effects due to subsidence (offsite impact prevention), highwall elimination and retention as a part of approximate original contour restoration (onsite reclamation success), and potential offsite

impacts from bond forfeiture sites (offsite impact prevention).

The team offered copies of the 1998 annual evaluation report to anyone who was interested in obtaining a paper copy and identified the location on the DOGM and OSM Internet homepages where an electronic copy of the report is accessible (respectively, http://www.dogm.nr.state.ut.us and http://www.osmre.gov).

The team did not receive any oral or written comments in response to its request for comments on the oversight process, recommendations for additional review topics, and suggestions for improvements for future annual evaluation reports.

B. <u>Utah Program</u>

In Castle Dale, Utah, on November 17, 1998, the Hydrology Outreach Committee held a Coal Country Forum on water rights that was attended by 60 persons from the general public, and Federal, State, and local agencies. The Committee describes itself as "a consortium of local, State and Federal government, consultants and industry representatives examining the interrelationships of water and mining, and promoting cooperation among water users."

In St. George, Utah, on March 11 and 12, 1999, the Hydrology Outreach Committee had a booth at the Water User's Conference. The Committee displayed information and answered questions on hydrology topics in the Emery County area.

In Price, Utah, on March 11, 1999, DOGM participated in the Utah Coal Conference for Government and Industry. About 120 persons from State and Federal agencies and the coal mining industry attended. Conference topics included abandoned machinery as potential hazardous substances and their effects in solid disposal sites, coal reserves, the effects on State and Federal coal leasing of the Bureau of Land Management's and School and Institutional Trust Lands Administration's land exchanges, mining-induced seismicity, and mining under perennial streams. The OSM Director spoke at the conference luncheon. On March 12, 1999, interested persons toured the Sunnyside Mine bond forfeiture site, which DOGM was actively reclaiming.

IV. Accomplishments, Issues, and Innovations

A. Accomplishments

In their review of three topics in evaluation year 1999, OSM and DOGM identified the following accomplishments. Because DOGM is successfully implementing the parts of its OSM-approved program relating to these topics, OSM and DOGM will not be further examining them in evaluation year 2000.

1. <u>Utah Interagency Water Quality Agreement</u>

As the result of their review of citizen complaints during evaluation year 1996, OSM and DOGM concluded that communication on water quality problems at coal mines could be improved between DOGM and the Utah Department of Environmental Quality (DEQ), the Utah Pollutant Discharge Elimination System permitting authority.

In evaluation year 1997, OSM and DOGM recommended that the October 16, 1990, memorandum of understanding (MOU) between DOGM and DEQ be revised to include provisions for DEQ to notify DOGM of violations of Utah Pollutant Discharge Elimination System permits and of the water quality standards at 40 CFR Part 434.

During evaluation year 1998, DOGM transmitted proposed MOU revisions to DEQ.

On September 1, 1999, the directors of DOGM and DEQ signed a revised MOU. In the revised MOU, the agencies have agreed to coordinate more closely in enforcing water quality standards on coal mines and to cooperate on other matters where they both have jurisdiction.

2. <u>Timely Decisions on Permit Applications</u>

DOGM engages in a variety of permitting activities (table 3).

As a measure of DOGM's effectiveness in providing customer service, OSM and DOGM analyzed how much time DOGM was taking to review and make decisions on major permit applications. Following is a table summarizing the results of this analysis.

	Number of permit applications for which DOGM made decision	Regulatory time limit for DOGM to make	Time for DOG decision on per applications (da	mit
Type of permit application	during evaluation period ¹	decision on permit applications (days)	Average	Range
New permits	1	365	293	_2
Significant permit revisions	2	120	37	27 - 47
Permit renewals	8	120	75	29 - 112
Permit amendments ¹	33	60	26	1 - 60

¹ With the exception of permit amendments, OSM and DOGM reviewed all permit decisions issued by DOGM during the evaluation period. They reviewed permit amendment decisions issued by DOGM during the 7-month period between October 1, 1998, and April 30, 1999.

In all instances, DOGM made the permit decisions within the required time periods, and on

² No range is shown, because DOGM issued only one new permit during the evaluation period.

average it made the decisions well in advance of the permit decision deadlines. In this respect, DOGM was effective in its serving its customers.

3. Prevention of Subsidence Offsite Impacts

As a part of their assessment of offsite impacts caused by coal mines in Utah, OSM and DOGM reviewed the effects of land surface subsidence above an underground mine. OSM and DOGM selected for review a mine (1) that used a variety of coal extraction methods (longwall, room-and-pillar with pillar extraction, and room-and-pillar without pillar extraction) and (2) that had a number of surface features whose uses should not be irreparably damaged (county road, inactive natural gas pipeline, streams, adjacent lake, and forestry and wildlife habitat postmining land uses).

OSM and DOGM did not find any evidence of subsidence (stress cracks, sinkholes, slope instability, and sheer failures) in areas outside those predicted for subsidence in the mine permit operation plan.

Also, OSM and DOGM did not see any indication of subsidence in the area predicted for the subsidence, although the mine permittee's subsidence monitoring data shows that the land surface subsided a maximum of 20 feet. This is within the range predicted by the permittee's computer software. The permittee indicated that it had filled with soil one 3-foot wide crack in this area. It also indicated that some small cracks had opened up in the county road surface and shoulder. Per an agreement made prior to mining, the county transportation department repaired the road and billed the permittee. There was no visible damage to the inactive natural gas pipeline because of the planned, uniform subsidence that occurred there. No known subsidence damage occurred to the streams, adjacent lake, and forestry and wildlife habitat postmining land uses.

OSM and DOGM concluded that DOGM's and the permittee's implementation of the Utah regulatory program requirements prevented irreparable offsite impacts due to subsidence.

B. <u>Issues</u>

In their evaluation of two topics, OSM and DOGM identified the following issues. OSM and DOGM will continue their evaluation of the following topic No. 1 in evaluation year 2000.

1. <u>Highwall Elimination and Retention As a Part of Approximate Original</u>
Contour (AOC) Restoration

During evaluation year 1997, DOGM expended considerable effort to prepare a detailed inventory of the 97 highwalls in the State. The inventory serves as a useful compendium of information on reclamation requirements and plans for each of the highwalls. In using the highwalls inventory, OSM and DOGM identified deficiencies in highwall reclamation plans in

one-fifth of the mine permits.

In evaluation year 1998, DOGM developed a prioritized schedule for the permittees to submit proposed permit revisions to correct the deficiencies and for DOGM to review the proposals. The permit revision due dates ranged from August 1998 to February 2000. By letters dated March 3 and 5, 1998, DOGM notified each of the permittees of the permit revision submission deadlines.

For evaluation years 1999 and 2000, OSM and DOGM agreed that they would (1) track the permit revision submission dates and DOGM permit revisions review dates to determine whether the schedule was being adhered to and (2) to review the revised permits to verify that the permit deficiencies were being resolved in accordance with the requirements of the Utah regulatory program.

In some instances, DOGM has, for good cause, given the permittees additional time to submit the permit revision applications. Thus far DOGM has approved three of the permit revision applications. OSM and DOGM have not yet completed their review of DOGM's findings and decisions on them.

2. Permitting of Coal Mine Access and Haul Roads

On July 3, 1995, DOGM sent to OSM a letter which included policy statements on the permitting of public roads. OSM agreed with the policy clarification and terminated a proceeding under 30 CFR Part 733 to substitute Federal enforcement for that part of the State program concerning the permitting of coal mine access and haul roads.

In its policy letter, DOGM indicated that an access or haul road may not be required to be permitted if (1) it was properly acquired by the governmental entity (not deeded to avoid regulation), (2) it is maintained with public funds or in exchange for taxes or fees, (3) it was constructed in a manner similar to other public roads of the same classification, and (4) impacts from mining are not significant under the definition of "affected area" and "surface coal mining operations."

During evaluation year 1997, OSM and DOGM reviewed a permit that DOGM had issued during that year to determine whether DOGM was implementing its July 3, 1995, permitting policy. OSM and DOGM concluded that DOGM did not comply with the policy because, in deciding not to require a road to be permitted, DOGM did not make written findings on the last three criteria cited above.

In evaluation year 1998, DOGM wrote for this permit the findings for the three criteria. For another permit that it issued and another permit application that it was processing, DOGM wrote findings for all four criteria.

In evaluation year 1999, DOGM augmented its findings for the fourth criteria above by conducting surveys of vehicle use of selected roads.

In evaluation year 2000, OSM and the western States will participate in a workshop on permit findings. Utah and the other States will discuss the written analysis needed to support findings. The workshop is intended to result in an overall upgrading of permit findings.

C. Innovations

For the fourth consecutive year, persons from OSM and DOGM continued to work as a team to evaluate and assist DOGM in the administration, implementation, and maintenance of the approved Utah regulatory program. During the evaluation year, the team consisted of 12 program and permitting specialists, scientists, and managers from OSM and DOGM. At a "SMCRA in the 21st Century" workshop in August 1999, DOGM team members presented to an audience of State and OSM employees a videotape that described the innovative team approach that OSM and DOGM are taking to conduct program evaluations in Utah.

DOGM developed a computerized water quantity and quality database, which is accessible on the Internet at http://hlunix.hl.state.ut.us/cgi-bin/appx-ogm.cgi to anyone who has an interest in the data for a specific mine. Targeted users include such groups as concerned citizens, mine permittees, State and Federal agencies, DOGM staff, and OSM. In evaluation year 1998, DOGM entered mine permittee data into the system. In evaluation year 1999, a permittee took the opportunity to directly enter ground and surface water data into the system.

DOGM is developing an electronic permitting system that will allow mine permittees to electronically retrieve formats for permit applications, to submit permit applications, and to access permit application and permit information such as DOGM technical analyses, probable hydrologic consequences analyses, and cumulative hydrologic impact assessments. As a part of the aforementioned Utah Coal Conference for Government and Industry held on March 11, 1999, DOGM gave an electronic permitting demonstration to industry and governmental representatives.

DOGM developed a computerized database, called the Coal Tracking System, to record its progress in reviewing permit applications (new permits, amendments, significant revisions, midterm reviews, renewals, and bond releases). This system is a project management tool that is intended to keep DOGM timely in making permit decisions. It allows DOGM managers to track the workload of permit application reviewers and to shift workload as necessary to meet required permit application review time periods. It also serves as a historical archive of all completed permitting actions.

V. <u>Success in Achieving the Purposes of SMCRA As Determined By Measuring and Reporting End Results</u>

To further the concept of reporting end results and measuring Utah's success in achieving the purposes of SMCRA, OSM and DOGM conducted evaluations whose purpose was to measure the number and extent of offsite impacts, the percentage of inspectable units free of offsite impacts, the number of acres that have been mined and reclaimed and meet the bond release requirements for the various phases of reclamation, and DOGM's effectiveness of customer service. Individual topic reports, which provide additional details on how OSM and DOGM conducted the evaluations and took the measurements, are available in the OSM Denver Field Division office.

A. Offsite Impacts

An "offsite impact" is anything resulting from a surface coal mining and reclamation activity or operation that causes a negative effect on resources (people, land, water, structures) outside the area authorized by the permit for conducting mining and reclamation activities.

Table 4 shows the number and type of offsite impacts that OSM and DOGM documented as having occurred during the evaluation year.

1. Sites Where DOGM Had Not Forfeited Reclamation Performance Bonds

OSM and DOGM assessed whether offsite impacts had occurred on each of the 29 inspectable units for which DOGM had not forfeited reclamation performance bonds. They did so through the following 321 on-the-ground observations: 4 OSM and DOGM joint, complete inspections; 111 DOGM complete inspections; 205 DOGM partial inspections; and 1 OSM and DOGM minesite evaluation on subsidence (discussed in preceding section IV.A.3).

OSM and DOGM found one incident where a mine caused an offsite impact - a minor impact to land resources (table 4, top half). An operator underground mined some Federal coal outside an approved permit area. OSM and DOGM did not observe any offsite impacts on the land surface.

Taking into consideration the one offsite impact, 96 percent of the permitted operations (28 of 29 permitted operations) were free of offsite impacts. This is a higher percentage than evaluation years 1998 and 1997 when OSM and DOGM found that respectively 82 and 87 percent of the permitted operations (23 of 28, and 26 of 30 permitted operations) were free of offsite impacts.

The low percentage of observed offsite impacts is an indication that Utah is effective at nonforfeiture minesites in preventing offsite impacts to water, people, land, and man-made structures.

2. <u>Sites Where DOGM Had Forfeited Reclamation Performance Bonds.</u>

Since 1981 when OSM approved the Utah permanent regulatory program, DOGM has forfeited reclamation performance bonds for five mines. Of the five bond forfeiture sites, three had been

entirely reclaimed in previous years, one was being actively reclaimed during the minesite evaluation, and one was unreclaimed and in the reclamation planning stage. OSM and DOGM toured each of these minesites and determined whether they were causing adverse impacts to adjacent unmined areas.

OSM and DOGM found one incident where a mine caused an offsite impact - a minor impact to water resources (table 4, bottom half). It occurred at the Sunnyside Mine that was being actively reclaimed. DOGM had expected the observed impact to water resources owing to a relocation of a perennial stream channel. This impact was minor in effect and short-term in duration. Long-term beneficial impacts of the stream relocation are discussed in following section V.B.2.

Taking into consideration the one offsite impact, 80 percent of the bond forfeiture sites (4 of 5 bond forfeiture sites) were free of offsite impacts. No comparison with previous years' data can be made since this was the first year that OSM and DOGM evaluated offsite impacts at bond forfeiture sites.

The low percentage of observed offsite impacts is an indication that Utah is effective at forfeiture minesites in preventing offsite impacts to water, people, land, and man-made structures

For the following reasons, OSM and DOGM do not anticipate that offsite impacts from bond forfeiture sites will become an issue of concern in the foreseeable future. There are no ongoing administrative proceedings to forfeit bonds for additional mines. Four of the five bond forfeiture minesites have now been entirely reclaimed. DOGM plans to reclaim the remaining site in evaluation year 2000. Four of the five minesites have minimal surface disturbances (a total of 33.6 acres, an average of 8.4 acres per minesite), which reduces the possibilities for future offsite impacts there.

On minesites where bonds are <u>not</u> forfeited, there is a well-defined bond release process in Utah's statute and rules for DOGM to follow in ending its jurisdiction on these sites (i.e., final phase III bond release). There is no similar, defined process for DOGM to follow in terminating its jurisdiction on bond forfeiture sites. As it nears completion of reclamation on all five bond forfeiture sites, DOGM is taking the initiative to develop written termination of jurisdiction policy for bond forfeiture sites.

B. Reclamation Success

1. Sites Where DOGM Had Not Forfeited Reclamation Performance Bonds

For sites where DOGM had <u>not</u> forfeited reclamation performance bonds prior to or during evaluation year 1999, OSM and DOGM used as the measure of reclamation success the disturbed acreage that had received bond release. Historically, the amount of bond release acreage in Utah has been very low due to the following two factors.

- Of Utah's 29 permitted operations, 24 are underground mines (table 2). Most of these underground mining operations are long-lived, and the surface disturbances for them are relatively small and remain active during the entire life of the mining operations because of their continued use as surface facilities.
- The 10-year minimum bond liability period and extreme climatic conditions make revegetation difficult.

Table 5 shows the acreage on active or inactive permits where DOGM partially released (phases I and II) or totally released (phase III) bonds during the evaluation year. For the 2,529 acres of total disturbance that had not yet received final (phase III) bond release at the beginning of the evaluation year, DOGM did not receive from the mine permittees any applications for phase I, II, or III bond releases. Consequently, DOGM did not grant any bond releases during the evaluation year.

In an effort to get a better understanding of how much acreage is reclaimed and <u>may</u> be eligible for bond release, OSM and DOGM compiled mine reclamation status information for all mines and facilities (coal loadouts and preparation plants) that DOGM has permitted under the Utah permanent regulatory program in the 18 years since OSM approved the program. Table 6 shows in detail the status of reclamation for all 29 active and inactive operations, 4 of the 5 mines for which DOGM forfeited the reclamation performance bonds, and 2 mines for which DOGM previously released all phase III bonds. (Not shown in the table is one of the bond forfeiture sites. DOGM permitted the site for exploration but never permitted it for fully developed, active mining under the Utah permanent regulatory program.) After reviewing the data in table 6, OSM and DOGM conclude that there is little disturbed acreage that has received reclamation work and that may be eligible for phase I, II, and III bond release.

In addition to the above analysis of bond release acreage, OSM and DOGM, as described in section IV.B.1, also assessed reclamation success in its evaluation of highwall reclamation. As described there, approximately one-fifth of the permits had reclamation plan deficiencies concerning highwall reclamation. Until all of the permittees revise their permits to resolve these deficiencies, OSM and DOGM will not be able to fully assess the degree of success of highwall reclamation in the State.

2. <u>Sites Where DOGM Had Forfeited Reclamation Performance Bonds.</u>

DOGM had forfeited bonds for two mines prior to the beginning of evaluation year 1999 (table 7).

During evaluation year 1999, DOGM reclaimed the 287-acre Sunnyside underground minesite, which had 48 mine portals and 8 mine shafts. During reclamation, DOGM relocated portions of Grassy Trail Creek, which was undercutting a county road, and otherwise improved the stream channel with native vegetation plantings. The postmining land use of the reclaimed land will be

grazing and wildlife habitat, including critical elk winter range. Final reclamation of this minesite is a significant accomplishment because it brings to a close environmental degradation that started over 100 years ago when the original mine was opened.

DOGM is planning to reclaim the 5-acre Blazon Mine site in evaluation year 2000. This is the last remaining site where DOGM had forfeited reclamation performance bonds.

C. <u>Customer Service</u>

As discussed in section IV.A.1, OSM and DOGM found as a result of their citizen complaint evaluations that a water quality MOU between DOGM and Utah DEQ did not promote effective communication on water quality enforcement. Ultimately, this ineffective communication could have led to disservice of two of DOGM's primary customers: citizens who may be affected by water quality noncompliances and mining companies that are responsible for resolving noncompliances. DOGM and DEQ signed a revised MOU that should have positive impacts for these customers.

As discussed in section IV.A.2, OSM and DOGM found that DOGM was effective in serving its customers to the extent that it made permit decisions within the time periods required by its rules.

VI. OSM Assistance

For the 1-year grant period starting July 1, 1999, OSM funded the Utah program in the amount of \$1.47 million (table 9). Through a Federal lands cooperative agreement, OSM reimburses DOGM for permitting, inspection, and other activities (table 8) that it performs for mines on Federal lands. Because most of the mines in Utah occur on Federal lands, the percentage of total program costs for which OSM provided funding was high (86.5 percent, table 9).

In evaluation years 1997 and 1998, OSM supported the development of the water quantity and quality database and the electronic permitting system that are discussed in section IV.C. It did so by providing \$22,131 to DOGM for computer hardware and software. In evaluation year 1999, OSM conveyed an additional \$6,020 to DOGM for the electronic permitting system project.

Under its Technical Training, Technical Information Processing System, and Technology Transfer Programs, OSM offers free of charge a variety of courses, workshops, and forums to State and Tribal employees. As described below, 19 DOGM employees participated in these activities during the evaluation year.

DOGM employees attended the following Technical Training Program courses and workshops: Applied Engineering Principles, Bonding Workshop - Administrative and Legal Aspects, Effective Writing, Enforcement Procedures, Enforcement Tools and Applications, Erosion and Sediment Control, Evidence, Expert Witness, Instructor Training Course, Permitting Hydrology, SMCRA in the 21st Century, Surface and Groundwater Hydrology, Underground Mining

Technology, and Wetlands Awareness. DOGM employees assisted in the teaching of the following Technical Training Program courses and workshops: Bonding Workshop - Administrative and Legal Aspects, Evidence, SMCRA in the 21st Century, and Wetlands Awareness.

DOGM employees attended the following Technical Information Processing System courses: Introduction to ArcView and Introduction to Global Positioning System.

DOGM employees attended the following Technology Transfer Program workshops and forum: Bond Release Interactive Forum on Revegetation Issues, Regression Analysis Workshop, and Statistical Sampling for Baseline Studies Workshop.

VII. Oversight Topic Reviews

In the time period from October 1, 1998, through September 30, 1999, OSM and DOGM evaluated the following topics: interagency water quality MOU, timeliness of permit application decisions, prevention of subsidence offsite impacts, and highwall elimination and retention as a part of AOC restoration. Written reports for all of these topics are available for review in the OSM Denver Field Division office.

Appendix. <u>Tabular Summary of Core Data Characterizing the Utah Program</u>

The following tables present data pertinent to mining operations and State and Federal regulatory activities within Utah. They also summarize Utah staffing and OSM funding. Unless otherwise specified, the reporting period for the data contained in all tables is October 1, 1998, to September 30, 1999.

TABLE 1

COAL PRODUCTION^A (Millions of short tons)

Period	Surface mines	Underground mines	Total
1995	0.43	25.73	26.16
1996	0.85	28.09	28.94
1997	0.61	25.79	26.40
1998	0.54	26.95	27.49

^ACoal production as reported in this table is the gross tonnage which includes coal that is sold, used or transferred as reported to OSM by each mining company on form OSM-1 line 8(a). Gross tonnage does not provide for a moisture reduction. OSM verifies tonnage reported through routine auditing of mining companies. This production may vary from that reported by States or other sources due to varying methods of determining and reporting coal production.

TABLE 2

INSPECTABLE UNITS As of September 30, 1999 Number and status of permits Inactive Coal mines Disturbed acreage^A Active or and related temporarily Abandoned **Totals** Phase II **facilities** inactive bond release Insp. PP PP ΤP PP IP PР IP IP Total Unit STATE and PRIVATE LANDS^B REGULATORY AUTHORITY: UTAH Surface mines 202 202 Underground mines 86 86 Other facilities 516 516 Subtotals 804 804 FEDERAL LANDS^C REGULATORY AUTHORITY: UTAH Surface mines Underground mines 19 19 1464 1464 Other facilities 81 Subtotals 21 1545 1545 **ALL LANDS** Surface mines 202 202 Underground mines 1550 1550 23 Other facilities 597 597 **Totals** 28 29 2349 2349 Average number of acres per inspectable unit (excluding exploration sites) 81 On Federal lands: Number of exploration permits on State and private lands: . 0 Number of exploration notices on State and private lands: . . _ _ 0 On Federal lands:

IP: initial regulatory program sites; PP: permanent regulatory program sites.

A Almost all of the operations are underground mines. The table shows disturbed, rather than permitted, acreage because disturbed acreage is a more meaningful measure for underground mines. The permitted acreage total was 113,310.

Mines or facilities where entire disturbed area occurs on State and/or private lands.

Mines or facilities where at least a portion of the disturbed area occurs on Federal lands.

Description of the Includes only exploration activities regulated by Utah pursuant to the Federal lands cooperative agreement with OSM. Does not include exploration activities regulated by the Bureau of Land Management.

TABLE 3

UTAH PERMITTING ACTIVITY As of September 30, 1999

Type of application		Surface mines	; 	Uı	ndergro mines			Other facilitie			Totals	·
	App. Rec.	Issued	Acres	App. Rec.	Issued	Acres ^A	App. Rec.	Issued	Acres	App. Rec.	Issued	Acres
New permits					1	29					1	29
Renewals				9	8	1140				9	8	1140
Amendments ^B				2	2	37				2	2	37
Incidental boundary revisions					1	214				·	1	214
Revisions (exclusive of incidental boundary revisions)			Property of the control of the contr	55	48		7	4		62	52	841 33 07 97 1 94 1 94 1 95 1 95 1 95 1 95 1 95 1 95 1 95 1 95
Transfers, sales and assignments of permit rights		•		3	3		-		250	3	3	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Small operator assistance				:								
Exploration permits				4	3					4	3	
Exploration notices ^C				2			***			2		
Totals				75	66	1420	7	4		82	70	1420

Number of midterm permit reviews completed that are not reported as revisions 6

A Includes only the number of acres of proposed surface disturbance.

^B Under the Utah program, "significant permit revisions" are made when there is an increase in the approved permit size of the surface or subsurface disturbed area in amount of 15 percent or greater. "Amendments" shown in this table are the "significant permit revisions" that Utah processed.

^C Utah approval not required. Involves removal of less than 250 tons of coal and does not affect lands designated unsuitable for mining.

TABLE 4

	OFF	ITE 1	OFFSITE IMPACTS ON SIT	LS ON	SITES	WHERE	BOND	S HAV	FES WHERE BONDS HAVE <u>NOT</u> BEEN FORFEITED	BEEN]	FORFE	HED		
		-			-	RE	RESOURCES AFFECTED	S AFFE	CTED					
DEGREE	DEGREE OF IMPACT		People			Land			Water			Structures	S	Total
DEGINEE	OI IIVII ACI	minor	moderate	major	minor	moderate	major	minor	moderate	major	minor	moderate	major	
TVPF	Blasting													
7111	Land Stability									·				
	Hydrology													
IMPACI	Encroachment					,								
`	Other				1									1
	Total				1									
Number of	Number of inspectable units:	29	П	spectable	units fre	Inspectable units free of offsite impacts:	e impacts;	. 28						
Percentage	Percentage of inspectable units free of offsite impacts: 96	its free	of offsite	impacts;	96									
	0	FSIT	OFFSITE IMPACTS ON	CTS O		ES WHE	RE BO	NDS H	SITES WHERE BONDS HAVE BEEN FORFEITED	EN FO	RFEIT	ED		
				ب		RE	RESOURCES AFFECTED	S AFFE(CTED					
			People			Land			Water			Structures	10	Total
DEGREI	DEGREE OF IMPACT	minor	moderate	major	minor	moderate	major	minor	moderate	major	minor	moderate	major	
TYPE	Blasting								:					
OF	Land Stability		-											
T	Hydrology							1						1
IMILACI	Encroachment													
	Other													
	Total							1						1
Number of Percentage	Number of inspectable units: 5 Inspectable un Percentage of inspectable units free of offsite impacts: 80	5 its free	In In Official	spectable impacts:	units fre	Inspectable units free of offsite impacts: e impacts: 80	e impacts.	4						

TABLE 5

ANNUAL STATE MINING AND RECLAMATION RESULTS

Bond release phase	Applicable performance standard	Acreage released during this evaluation period
Phase I	Approximate original contour restored	0 ^A
Phase II	 Topsoil or approved alternative replaced Surface stabilized Vegetation established 	0 ^A
Phase III	 Postmining land use/productivity restored Vegetation successfully and permanently established Groundwater recharge, quality, and quantity restored Surface water quality and quantity restored 	0 ^A
	Bonded acreage status	Acres
	umber of bonded acres at end of last on year (September 30, 1998) ^B	2529
	umber of bonded acres at the end of this on year (September 30, 1999) ^B	2349
	of acres at the end of this evaluation year bonded for remining	0.00
	of acres where bond was forfeited during luation year	0.00

A Throughout the history of the Utah permanent regulatory program, the acreage receiving bond release has been low owing to (1) most of the operations being long-lived underground mines with relatively small surface disturbances that remain active during the entire life of the mining operations and (2) a 10-year minimum bond liability period and extreme climatic conditions that make revegetation difficult.

Bonded acreage in this category is disturbed acreage that had not received a phase III bond release.

REC	LAMAT	RECLAMATION STATUS OF AL		OF ALL	AREAS D	IS OF ALL AREAS DISTURBED UNDER THE UTAH PERMANENT REGULATORY PROGRAMA (Acres)	(Acres)	R THE (ЛАН	PERMA	NENT	REGU	LATO	RY PR	OGR.	ij		
						As of September 30, 1999	otember	30, 1999										
	Mine type		Disturbed area	ed area	-	Active mining areas (pits and areas in advance of the	Areas backfilled		Areas wi has relea	Areas where Utah has released phase	Areas soiled and	led and	Areas where Utah has released phase	here s phase	Areas final seeded/planted		Areas where Utah has released phase	iere phase
Permittee, mine name, and permit number	Surface	Under- ground	EY 1999	Total (all years)	Long-term mining or reclamation facilities ⁸	pits stripped of topsoil) and areas not yet backfilled and graded^	EY (Fotal all	EY 1999	Total (all years)	seeded/planted Total EY (all 1999 years	Total (all years)	II bond EY 1999	Total (all years)	for 10 years To EY (al) 1999	rs) ral	III bond EY 1999	Total (all years)
Active, temporarily inactive, inactive, and abandoned sites.	inactive, and	abandoned sit	ig.															
Lodestar Energy, Inc. White Oak #1 and #2/Loadout ACT/007/001	(loadout)	· ×		140.2	140.2	-											·	
Castle Gate Holding Company Castle Cate Mine ACT/007/004		×		71.5	·			18.2 (Sow- belly Canyon)		18.2 (Sowbelly Canyon)		18.2						
Canyon Fuel Company, LLC Skyline Mine ACT/007/005		×		72.32	72.32													
Plateau Mining Corporation Star Point Mine ACT/007/006		×		173.2	173.2													
Hiawatha Coal Company Hiawatha Mine ACT/007/011	-	×		290	290						·						·	
Nevada Electric Investment Company Wellington Preparation Plant ACT/007/012	(prepara- tion plant)			356	356	·												
UtahAmerican Bnergy, Inc. Horse Canyon Mine ACT/007/013		×		87	87			61.65		61.65		61.65						
Mountain Coal Company Gordon Creek #2, #7, and #8 ACT/007/016		X		17.58	17.58		. 6	17.58										
Canyon Fuel Company, LLC Soldier Canyon Mine ACT/007/018		×		24	24													
Andalex Resources, Inc. Centennial Mine ACT/007/019		×		34.2	34.2													
Lodestar Energy, Inc. Horizon Mine ACT/007/020		×		9.5	9.5													
Savage Industries, Inc. Savage Coal Terminal ACT/007/022	(preparation plant and loadout)			160	160												,	



Andalex Resources, Inc. Wildeat Loadout ACT/007/033	(preparation plant and loadout).			09	09					·							
Canyon Fuel Company, LLC Banning Loadout ACT/007/034	(prepara- tion plant and loadout)		-	21	21			,									
Sunnyside Cogeneration Associates (SCA) SCA ACT/007/035	×			202	202					5.5 (coarse refuse road)							
Plateau Mining Corporation Willow Creek Mine ACT/007/038		×		132.9	132.9							·					
Canyon Fuel Company, LiLC Dugout Mine ACT/007/039		×	10.1	20.1	20.1												
West Ridge Resources, Inc. West Ridge Mine ACT/007/041		×	82	29	. 29	,											
Western States Minerals Corp. J.B. King Mine ACT/015/002		X		28				28		78		28					
Consolidation Coal Company Hidden Valley Mine ACT/015/007		X		6.7	6.7			6.7		6.7		6.7					
PacifiCorp Trail Mountain Mine ACT/015/009		X		24.78	24.78		-										
Consolidation Coal Company Emery Deep Mine ACT/015/015		×		40°	40°												
PacifiCorp Des-Bee-Dove Mine ACT/015/017		×		28 ^D	78												
PacifiCorp Deer Creek Mine ACT/015/018		×		95.8	95.8												
PacifiCorp Cottonwood/Wilberg Mine ACT/015/019	-	x		101.74	101.74											-	.01 ^E
Co-Op Mining Company Trail Canyon Mine ACT/015/021		×		10				10		10		10	01	0	10		
Co-Op Mining Company Bear Canyon Mine ACT/015/025	, i	x	-	24	24												
Genwal Resources, Inc. Crandall Canyon ACT/015032		×		20	20						:						
Canyon Fuel Company, LLC SUFCO Mine ACT/041/002		×	.28	86.69	86.69			·									
Sites receiving full release of reclamation performance bonds. F	reclamation p	erformance l	"space			}	f		-	-	-						
Blackhawk Coal Company Willow Creek Mine ACT/007/002		×		4.2					·	Ö			5				4.2 ^G

Mountain Coal Company Gordon Creek #3 and #6 ACT/007/017		×		17.3		17	17.3	17.3		17.3	17.3	17.3	17.3	17.3
Mountain Coal Company Huntington #4 Mine ACT/015/004	·	×		, 12.5		12	12.5	12.5		12.5	12.5	12.5		12.5
Bond forfeiture sites.														
Sunnyside Coal Company Sunnyside Mine FOR/007/007		×		287.4		 287.4	4.		287	287.4 ^H				
North American Equities Blazon Mine FOR/007/021		×		4.65		1,4	4.65	4.65						
Summit Minerals Summit #1 FOR/043/001		×		19		-	161			91				
Summit Coal Company Boyer Mine FOR/043/008		×	w	7	·	7	7K			7K				
[Total	5	30	39.38	2697.35	2268	489.98	38	164.5	467.75	.75	39.8	39.8	17.3	29.9

A Blanks in the table denote zeros.

^{*} Long-term mining or reclamation facilities include haul and access roads; temporary dams and impoundments; permanent dams and impoundments; diversion and collector ditches; water and air monitoring sites; topsoil stockpiles; overburden stockpiles; repair, storage, and construction areas; coal stockpile, loading, and processing areas; railroads; coal conveyors; refuse piles and coal mine waste impoundments; head-of-hollow fills; valley fills; ventilation shafts and entryways; and noncoal waste disposal areas (garbage dumps and coal combustion by-products disposal areas).

C The mine is in temporary cessation, and the permittee estimated 40 acres of actual disturbance to date. In the permit application package, the permittee has bonded a total of 247 acres for proposed disturbance.

D Not included in this disturbed acreage total are 93.18 disturbed acres in an access road that was removed from the permit area through the bond release process.

E Channel Canyon portal breakout reclamation; no phase I and II bond release prior to phase III bond release.

F Not shown in the table is the New-Tech Mining Corporation, New-Tech Mine, which disturbed 3 acres. DOGM permitted the site for exploration but never permitted it for fully developed, active mining under the Utah permanent

⁶ No phase I and II bond release prior to phase III bond release.

[&]quot; Utah forfeited the bond on November 22, 1996. A Utah-hired contractor completed reclamation in July 1999,

¹ Utah forfeited the bond on May 24, 1991. Utah has not yet begun any bond forfeiture reclamation.

¹ Utah forfeited the bond on January 26, 1989. A Utah-hired contractor completed reclamation on November 20, 1997.

K Utah forfeited the bond on June 23, 1989. A Utah-hired contractor completed reclamation on April 17, 1997.

TABLE 7

STATE BOND FORFEITURE ACTIVITY (Permanent Program Permits)

	Sites	Dollars	Acres
Bonds forfeited as of September 30, 1998 ^A	2	1,888,184	292.05 ^B
Bonds forfeited during EY 1999	0		_
Forfeited bonds collected as September 30, 1998 ^A	2	1,888,184	292.05 ^B
Forfeited bonds collected during EY 1999	0		
Forfeiture sites reclaimed during EY 1999	1	1,850,184 c	287.4 ^B
Forfeiture sites repermitted during EY 1999	0		
Forfeiture sites unreclaimed as of September 30, 1999	1		4.65 ^B
Excess reclamation costs recovered from permittee	0		·
Excess forfeiture proceeds returned to permittee	0		

A Includes data only for those forfeiture sites not fully reclaimed as of this date.

^B Disturbed acres.

Cost of reclamation, excluding general administrative expenses.

TABLE 8

Total UTAH STAFFING (Full-time equivalents at end of evaluation year) Function EY 1999 Regulatory Program 15.0 Inspection 6.0 Other (administrative, fiscal, personnel, etc.) 3.0 Total 24.0

TABLE 9

FUNDS GRANTED TO UTAH BY OSM (Millions of dollars) EY 1999 **Federal** funding **Federal** Type of funds as a percentage of awarded grant total program costs Administration and enforcement 1.47 86.5 0.0 Small operator assistance 0.00 1.47 Total

OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT

Annual Evaluation Summary Report

for the

Regulatory Program

Administered by the State

of

Utah

for

Evaluation Year 2000

(October 1, 1999, through September 30, 2000)

November 2000

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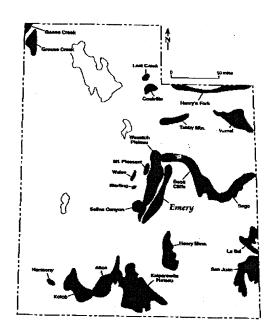
Appendix. Tabular summary of core data characterizing the Utah program

I. Introduction

The Surface Mining Control and Reclamation Act of 1977 (SMCRA) created the Office of Surface Mining Reclamation and Enforcement (OSM) in the Department of the Interior. SMCRA provides authority to OSM to oversee the administration of and provide Federal funding for State regulatory programs that have been approved by OSM as meeting the minimum standards of SMCRA. This report contains summary information regarding the Utah program and the effectiveness of the Utah program in meeting the applicable purposes of SMCRA as specified in section 102. This report covers the period of October 1, 1999, through September 30, 2000. Detailed background information and comprehensive reports for the program elements evaluated during the period are available for review and copying at the OSM Denver Field Division office.

II. Overview of the Utah Coal Mining Industry

Coal is found beneath approximately 18 percent of the state of Utah, but only 4 percent is considered minable at this time. The demonstrated coal reserve base is about 6.4 billion tons, which is 1.3 percent of the national reserve base. Most of Utah's coal resources are held by the State and Federal governments and Indian tribes.



Utah coal fields are shown on the figure to the left (Utah Geological Survey, "Survey Notes", September 1998). In 1999 and 2000, only the Wasatch Plateau and Book Cliffs coal fields were being actively mined. In 1999, these coal fields respectively accounted for 89 and 11 percent of the total production (Utah Department of Natural Resources, Office of Energy and Resource Planning, "1999 Annual Review and Forecast of Utah Coal Production and Distribution", July 2000; http://www.nr.state.ut.us/energy/home.htm).

Most of the coal is bituminous and is of Cretaceous age. The Btu value is high compared to most other western States. Sulfur content ranges from medium to low in the more important coal fields.

Coal production steadily increased from the early 1970's and peaked in 1996 at almost 29 million tons. Production in 1999 was approximately 26.6 million tons (table 1). The majority of the coal production is produced by underground mining operations, which mostly mine seams exceeding

8 feet in thickness.

As of September 30, 2000, Utah had 28 permitted operations that had disturbed 2,309 acres (table 2). Utah considered each of these operations to be an inspectable unit. Of these 28 operations, 27 were active or temporarily inactive, 1 was inactive, and none were abandoned (table 2). Of the 27 active or temporarily inactive operations, 10 were underground mines that use the longwall mining method, 12 were underground mines that use the room-and-pillar mining method, 1 was a surface mining operation extracting coal from an underground mine refuse pile, and 4 were coal preparation plants/loadout facilities.

Utah's coal mining industry has a significant impact on the local economies where mining occurs. In 1999, the industry employed 1,843 miners (Utah Department of Natural Resources, Office of Energy and Resource Planning, "1999 Annual Review and Forecast of Utah Coal Production and Distribution", July 2000). In 1999 in Carbon, Emery, and Sevier Counties where mining currently occurs, mining employment respectively declined 12.6, 4.5, and 2.1 percent, mainly due to losses of coal mining jobs (Utah Department of Workforce Services, "Labor Market Information", October 25, 2000; http://wi.dws.state.ut.us/Regions/eastern.htm).

The climate of the Wasatch Plateau and Book Cliffs coal fields is characterized by hot, dry summers and cold, relatively moist winters. Normal precipitation varies from 6 inches in the lower valleys to more than 40 inches on some high plateaus. The growing season ranges from 5 months in some valleys to only 2 ½ months in mountainous regions.

III. Overview of the Public Participation Opportunities in the Evaluation Process and Utah Program

A. Evaluation Process

On May 24, 2000, in Castle Dale, Utah, the OSM and DOGM co-leaders of the OSM/Utah evaluation team gave a presentation at the meeting of the Utah Board of Oil, Gas and Mining. In addition to the 6 Board members, about 25 people were in attendance.

The purpose of the presentation was to brief the Board on the team's report for evaluation year 1999 (October 1, 1998, through September 30, 1999) and to give the Board and the public an opportunity to provide input into the evaluation process.

The team co-leaders described two of OSM's goals for all SMCRA State regulatory programs: prevention of offsite impacts at all mines and successful, onsite reclamation at all mines. With respect to offsite impacts prevention, they explained that the team had found that 96 percent of the mines were free of offsite impacts in evaluation year 1999. With respect to successful, onsite reclamation, they explained that no mines had received a phase I, II, or III bond release during evaluation year 1999 but that the Division of Oil, Gas and Mining (DOGM) had completed bond forfeiture reclamation on the 287-acre Sunnyside Mine.

The team co-leaders also identified the following topics that the team was reviewing in evaluation year 2000: coal refuse pile reclamation (reclamation success), operations under temporary cessation (reclamation success and offsite impacts), highwall elimination and retention as a part of approximate original contour restoration (reclamation success), and permit findings (a DOGM self-evaluation).

The team co-leaders offered copies of the 1999 annual evaluation report to anyone who was interested in obtaining a paper copy and identified the location on the DOGM and OSM Internet home pages where an electronic copy of the report is accessible (respectively, http://www.dogm.nr.state.ut.us.coal and http://www.osmre.gov/report99.htm).

The team co-leaders did not receive any oral or written comments in response to its request for comments on the evaluation process, recommendations for additional review topics, and suggestions for improvements for future annual evaluation reports.

B. Utah Program

DOGM regularly attends and participates in monthly meetings of the Emery County Public Lands Council in Castle Dale, Utah (the Emery County seat). The mission of the Emery County Public Lands Council is to "work in partnership with federal and state agencies in fashioning management decisions and policies affecting lands within Emery County."

On July 12, 2000, at the College of Eastern Utah in Price, Utah, DOGM conducted a seminar for 20 operators and consultants on the use of DOGM's water quality database.

IV. Accomplishments, Issues, and Innovations

A. Accomplishments

Since 1981 when OSM approved the Utah permanent regulatory program, DOGM has forfeited reclamation performance bonds for five mines. In previous evaluation years, DOGM completed bond forfeiture reclamation on four of the mines. A few days after the end of evaluation year 2000, DOGM completed reclamation on the one remaining mine (the Blazon No. 1 Mine). Reclamation on these five bond forfeiture sites has been very successful.

B. <u>Issues</u>

Just prior to DOGM's initiation of bond forfeiture reclamation on the Blazon No. 1 Mine late in evaluation year 2000, the landowners of the minesite submitted a written complaint to OSM. After reviewing the complaint, OSM had reason to believe that the permittee North American Equities might be violating the regulations or laws, so it sent a notice to DOGM requesting action. After a DOGM inspection of the minesite to investigate the potential violation, DOGM convinced OSM that it had good cause for not taking an enforcement action against the

permittee.

In addition to the aforementioned enforcement issue, the landowners raised in their complaint various allegations about DOGM not properly implementing its regulatory program on the Blazon No. 1 Mine. Since these allegations concerned alleged improprieties of DOGM and not alleged violations by the permittee, they were not subject to any enforcement review by OSM. OSM and DOGM agreed that they would discuss these issues in evaluation year 2001 and decide whether any of DOGM's actions on the Blazon No. 1 Mine permit constitute deficiencies in the Utah program that need to be addressed.

In the course of their review of the complaint, OSM and DOGM reviewed the DOGM inspection reports for the mine. They found that starting in September 1996 DOGM had reduced its inspection frequency of the mine from 12 monthly inspections per year to 1 inspection per year. DOGM's "abandoned sites" rules allow for such a reduction if the review of the environmental conditions at the site justify it, but DOGM did not make written findings supporting this decision as required by its rules. Upon becoming aware of this omission, DOGM prepared the required written findings. DOGM has also reduced the inspection frequency on the other four bond forfeiture sites without preparing the required written findings. DOGM is preparing the findings for the four sites.

C. Innovations

For the fifth consecutive year, persons from OSM and DOGM continued to work as a team to evaluate and assist DOGM in the administration, implementation, and maintenance of the approved Utah regulatory program. During the evaluation year, the team consisted of 14 program and permitting specialists, scientists, and managers from OSM and DOGM. At a "SMCRA in the 21st Century" workshop in Cincinnati, Ohio, in September 2000, a DOGM team member presented to an audience of State and OSM employees a videotape that described the innovative team approach that OSM and DOGM are taking to conduct program evaluations in Utah.

During this evaluation period, DOGM finalized The Practical Guide to Reclamation in Utah. In this document, DOGM describes reclamation techniques that have been developed and successfully used in Utah over the past 20 years. This manual was presented and well-received at the Utah Mining Association annual meeting on August 17, 2000, and at the Utah Coal Environmental Subcommittee meeting on August 25, 2000. It is available on the DOGM Internet home page (http://www.dogm.nr.state.ut.us.coal).

DOGM has been standardizing and auditing its procedures for coal mining and reclamation permits under the Utah coal regulatory program. A DOGM "process team" has been diligently documenting and refining these procedures.

V. <u>Success in Achieving the Purposes of SMCRA As Determined By Measuring and Reporting End Results</u>

To further the concept of reporting end results and measuring Utah's success in achieving the purposes of SMCRA, OSM and DOGM conducted evaluations whose purpose was to measure the number and extent of offsite impacts, the percentage of inspectable units free of offsite impacts, the number of acres that have been mined and reclaimed and meet the bond release requirements for the various phases of reclamation, and DOGM's effectiveness of customer service. Reports, which provide additional details on how OSM and DOGM conducted the evaluations and took the measurements, are available in the OSM Denver Field Division office.

A. Offsite Impacts

An "offsite impact" is anything resulting from a surface coal mining and reclamation activity or operation that causes a negative effect on resources (people, land, water, structures) outside the area authorized by the permit for conducting mining and reclamation activities.

Table 4 shows the number and type of offsite impacts that OSM and DOGM documented as having occurred during the evaluation year.

1. <u>Sites Where DOGM Had Not Forfeited Reclamation Performance Bonds</u>

OSM and DOGM assessed whether offsite impacts had occurred on each of the 29 permitted operations that existed at some time during the evaluation period and for which DOGM had not forfeited reclamation performance bonds. (By the end of the evaluation period, DOGM had fully released the bond for one of these operations.) OSM and DOGM did so through the following 319 on-the-ground observations: 4 OSM and DOGM joint, complete inspections; 111 DOGM complete inspections; 200 DOGM partial inspections; and 4 OSM and DOGM minesite evaluations on operations under temporary cessation (discussed in following section VII).

OSM and DOGM found one incident where a mine caused an offsite impact - a minor impact to land resources (table 4, top half). An operator underground mined some coal outside an approved permit area. OSM and DOGM did not observe any offsite impacts on the land surface.

Taking into consideration the one offsite impact, 96 percent of the permitted operations (28 of 29 permitted operations) were free of offsite impacts. This is the same percentage as OSM and DOGM found in evaluation year 1999 (28 of 29 operations) and a higher percentage than evaluation years 1998 and 1997 when OSM and DOGM found that respectively 82 and 87 percent of the permitted operations (23 of 28, and 26 of 30 permitted operations) were free of offsite impacts.

The high percentages are an indication that Utah is effective at nonforfeiture minesites in preventing offsite impacts to water, people, land, and man-made structures.

2. Sites Where DOGM Had Forfeited Reclamation Performance Bonds.

Since 1981 when OSM approved the Utah permanent regulatory program, DOGM has forfeited reclamation performance bonds for five mines. In previous evaluation years, DOGM completed bond forfeiture reclamation on four of the mines. A few days after the end of evaluation year 2000 DOGM completed reclamation on the one remaining mine (the Blazon No. 1 Mine).

In evaluation year 1999, OSM and DOGM toured each of the five minesites and observed one offsite impact (an unavoidable, minor impact to water that was occurring as the result of a stream diversion relocation during reclamation). Owing to the completed or pending reclamation on all five sites and the erosional stability of the three sites that had been reclaimed as of the time of the minesite reviews in evaluation year 1999, OSM and DOGM decided not to revisit the sites in evaluation year 2000.

Following this decision and as discussed in preceding report section IV.B., OSM received a citizen complaint on the Blazon No. 1 Mine bond forfeiture site. Prior to DOGM's initiation of bond forfeiture reclamation late in evaluation year 2000, the landowners submitted a written complaint alleging among other things that uncontrolled surface water runoff from the mine was entering an adjacent stream. DOGM conducted an inspection of the site to investigate this allegation. DOGM did not find evidence of an offsite impact that was caused by uncontrolled runoff.

Because OSM and DOGM did not observe any offsite impacts on the five bond forfeiture sites, table 4 (bottom half) shows that 100 percent of these sites were free of offsite impacts. By comparison and as discussed above, OSM and DOGM observed one offsite impact in evaluation year 1999 (4 of 5 operations, 80 percent).

The high percentages are an indication that Utah is effective at bond forfeiture minesites in preventing offsite impacts to water, people, land, and man-made structures

For the following reasons, OSM and DOGM do not anticipate that offsite impacts from bond forfeiture sites will become an issue of concern in the foreseeable future. There are no ongoing administrative proceedings to forfeit bonds for additional mines. All five of the bond forfeiture minesites have now been entirely reclaimed. Four of the five minesites have minimal surface disturbances (a total of 33.6 acres, an average of 8.4 acres per minesite), which reduces the possibilities for future offsite impacts there.

On minesites where bonds are <u>not</u> forfeited, there is a well-defined bond release process in Utah's statute and rules for DOGM to follow in ending its jurisdiction on these sites (i.e., final phase III bond release). There is no similar, defined process for DOGM to follow in terminating its jurisdiction on bond forfeiture sites. DOGM is taking the initiative to develop written termination of jurisdiction policy for bond forfeiture sites.

B. Reclamation Success

1. Sites Where DOGM Had Not Forfeited Reclamation Performance Bonds.

For the operations where DOGM had not forfeited reclamation performance bonds, OSM and DOGM used as the measure of reclamation success the disturbed acreage that had received bond release. Historically, the amount of bond release acreage in Utah has been very low due to the following two factors.

- Most of the permitted operations are underground mines (table 2). Underground mining operations are long-lived, and the surface disturbances for them are relatively small and remain active during the entire life of the mining operations because of their continued use as surface facilities.
- The bond liability period is a minimum of 10 years.

Table 5 shows the acreage on active or inactive permits where DOGM partially released (phases I and II) or totally released (phase III) bonds during the evaluation year. For the 2,349 acres of total disturbance that had not yet received final (phase III) bond release at the beginning of the evaluation year, DOGM granted a phase III bond release of 28 acres. It did not grant any phase I or II bond releases.

In an effort to get a better understanding of how much acreage is reclaimed and <u>may</u> be eligible for bond release, OSM and DOGM compiled mine reclamation status information for all mines and facilities (coal loadouts and preparation plants) that DOGM has permitted under the Utah permanent regulatory program in the 19 years since OSM approved the program. Table 6 shows the detailed reclamation status of the active and inactive operations, the operations for which DOGM forfeited the reclamation performance bonds, and the operations for which DOGM released all phase III bonds. After reviewing the data in table 6, OSM and DOGM conclude that there is little disturbed acreage that has received reclamation work and that may be eligible for phase I, II, or III bond release.

In addition to the above analysis of bond release acreage, OSM and DOGM also assessed reclamation success in its evaluation of refuse pile reclamation, operations under temporary cessation, and highwall reclamation. For a discussion of these evaluations, see following section VII.

2. Sites Where DOGM Had Forfeited Reclamation Performance Bonds.

The Blazon No. 1 Mine was the last remaining site where DOGM had forfeited the reclamation performance bonds but had not completed reclamation.

DOGM had forfeited the \$38,000 bond for the 4.65-acre Blazon No. 1 Mine (table 7) in 1991.

Prior to initiation of reclamation on the site at the end of evaluation year 2000, DOGM obtained the following additional monies for reclamation: \$10,989.27 in interest, \$20,000 from its fines account, \$30,000 from the Division of Wildlife Resources Habitat Council, and \$10,000 of inkind volunteer services. DOGM completed the reclamation a few days after the end of the evaluation period.

C. Customer Service

As a customer service evaluation, DOGM continued a long-term, self-evaluation of the written findings that it prepares for permit applications. When completed, this project should result in improved findings, which are important not only to DOGM but also to the public that it serves (e.g., citizens and coal companies)

For a discussion of this evaluation, see following section VII.

VI. OSM Assistance

For the 1-year grant period starting July 1, 2000, OSM funded the Utah program in the amount of \$1.53 million (table 9). Through a Federal lands cooperative agreement, OSM reimburses DOGM for permitting, inspection, and other activities (table 8) that it performs for mines on Federal lands. Because most of the mines in Utah occur on Federal lands, the percentage of total program costs for which OSM provided funding was high (87 percent, table 9).

In evaluation years 1997, 1998, and 1999, OSM supported the development of an electronic permitting system by providing \$28,151 to DOGM for computer hardware and software. In evaluation year 2000, OSM provided additional hardware for the electronic permitting system: a Windows NT workstation, priced at \$3,873, for the management of digital data and two digital cameras, priced at \$2,188, for field documentation of inspections and bond releases.

Under its Technical Training, Technical Information Processing System, and Technology Transfer Programs, OSM offers free of charge a variety of courses, workshops, and forums to State and Tribal employees. As described below, 11 DOGM employees participated in these activities during the evaluation year.

DOGM employees attended the following Technical Training Program courses and workshop: Enforcement Procedures, Erosion and Sediment Control, Historic and Archeological Resources, Permit Findings Workshop, Permitting Hydrology, and SMCRA in the 21st Century. A DOGM employee twice assisted in the teaching of the following Technical Training Program workshop: Permit Findings Workshop.

DOGM employees attended the following Technical Information Processing System courses: Introduction to ArcView and Introduction to Global Positioning System.

A DOGM employee attended the following Technology Transfer Program workshop: Soil Geochemistry for Arid and Semi-Arid Environments Workshop. DOGM employees attended and made presentations at the following Technology Transfer Program symposium and forum: Billings (Montana) Land Reclamation Symposium 2000 and the interactive forum on Surface Mining Reclamation Approaches to Bond Release: Cumulative Hydrologic Impacts Assessment and Hydrology Topics for the Arid and Semi-Arid West.

In response to 14 requests by DOGM staff, OSM's technical librarian provided various information, including 192 journal article reprints.

VII. Evaluation Topic Reviews

Each year OSM and DOGM evaluate topics to determine whether DOGM is effective in preventing offsite impacts, ensuring reclamation success, and serving its customers. Following are discussions of the evaluations that they conducted in the time period from October 1, 1999, through September 30, 2000. Written reports for these topics are available for review in the OSM Denver Field Division office.

A. <u>Coal Refuse Pile Reclamation</u>

Underground coal mines create coal refuse piles that are composed of underground development waste and coal processing waste. Underground development waste is waste-rock mixtures of coal and rock that are excavated and disposed of from underground mine workings. Coal processing waste is earth material that is separated and removed from coal during cleaning and preparation of the coal for market.

Because most of Utah's operations are underground mines that have coal refuse piles, their reclamation is important to the success of the Utah program. During this evaluation year, OSM and DOGM evaluated reclamation success on refuse piles at four mines that had been revegetated from 10 to 4 years earlier. They analyzed whether ground cover, woody species density, and species diversity met or exceeded the permit standards for these criteria (established by reference areas or technical standards). They also analyzed whether the ground surface was eroding excessively.

With the exception of shrub density, OSM and DOGM found that the four mines exceeded, or were likely in the future to exceed, the revegetation success criteria. With respect to shrub density, OSM and DOGM found that two mines had good stands of shrubs that should support the postmining land use of wildlife habitat but that shrub densities fell far short of the standards for these mines. The OSM and DOGM evaluators recommended that DOGM consult with the Utah Division of Wildlife Resources to determine whether more realistic shrub density standards should be set for these and other mines.

Also with respect to shrub density, OSM and DOGM evaluators recommended the establishment

of some permanent plots on reclaimed lands, including refuse piles. The purpose of the plots would be to assess whether plant species regeneration and invasion of native species from surrounding areas are likely to augment planted shrubs on the reclaimed lands to the extent that the shrub planting densities could be reduced on some mines.

Lastly, with respect to shrub density, OSM and DOGM evaluators recommended that, at one mine where vegetation test plots will soon be disturbed in the final reclamation of the refuse pile, the effect of topsoil depth on rooting depth and characteristics be looked at.

In test plots on one of the refuse piles, OSM and DOGM observed excessive erosion owing to steep slopes of about 40 percent. The operator of the mine is aware of this issue and is revising the grading plan for the pile.

B. Operations Under Temporary Cessation

Under Utah's rules, an operation that has been idle for 30 or more days may temporarily cease mining and reclamation operations by submitting a notice to DOGM. In this notice, the operator must identify the reclamation operations and environmental monitoring that will occur during the time of temporary cessation.

At the midpoint of the evaluation year, 4 of the 29 Utah operations were in temporary cessation. OSM and DOGM conducted a field evaluation on each of the four operations to determine whether the mines were causing offsite impacts and whether reclamation on the sites was timely (a measure of reclamation success).

OSM and DOGM found that overall DOGM ensures that offsite impacts were prevented and reclamation was timely at those sites that were in temporary cessation. However, there are opportunities for DOGM to improve its regulation of these sites.

The OSM and DOGM evaluators recommended that DOGM develop a formal process for reviewing permittees' notices of intention to temporarily cease operations. This process should include:

- Identification by DOGM permitting and inspection staff of areas that need to be reclaimed prior to or during the time of temporary cessation,
- preparation of written findings by DOGM on the temporary cessation notice, which the team recommends be in the form of a technical analysis document, and
- verification at the time of permit renewal that the permittee still has right-of-entry onto the property (e.g., valid, existing coal and surface leases).

Subsequent to OSM-Western Region and DOGM undertaking this evaluation, OSM-

Headquarters contacted OSM-Western Region and indicated its intent to initiate rulemaking on the Federal temporary cessation regulations. As a part of rulemaking outreach, OSM-Headquarters distributed a survey, which OSM-Western Region and DOGM completed and returned. OSM-Western Region and DOGM recommended that the Federal regulations be revised to:

- require verification at the time of receipt of the temporary cessation notice and again at permit midterm and permit renewal that the permittee has adequate coal reserves and leases for the operation, including consultation with the Bureau of Land Management on Federal coal leases and the responsible State agency on State coal leases,
- require a demonstration by the permittee that there is a reasonable likelihood that mining will resume in the near future (i.e., a reasonable likelihood that the operation will recommence operations and not suspend operations permanently), and
- apply different standards to surface and underground mining operations, because there is a greater economic incentive for underground mine operators to recommence operations than for surface mine operators to do so.
 - C. <u>Highwall Elimination and Retention As a Part of Approximate Original Contour</u>
 Restoration

As an evaluation of reclamation success, OSM and DOGM conducted a multiyear review of highwall elimination and retention as a part of approximate original contour restoration.

During evaluation year 1997, DOGM prepared a detailed inventory of the 97 highwalls in the State. The inventory serves as a useful compendium of information on reclamation requirements and plans for each of the highwalls. In using the highwalls inventory, OSM and DOGM identified deficiencies in highwall reclamation plans in one-fifth of the mine permits (seven permits).

In evaluation year 1998, DOGM developed a prioritized schedule for the permittees to submit proposed permit revisions to correct the deficiencies and for DOGM to review the proposals. The permit revision due dates ranged from August 1998 to February 2000. By letters dated March 3 and 5, 1998, DOGM notified each of the permittees of the permit revision submission deadlines.

In evaluation years 1999 and 2000, OSM and DOGM (1) tracked the permit revision submission dates and DOGM permit revisions review dates to determine whether the schedule was being adhered to and (2) reviewed the revised permits to verify that the permit deficiencies were being resolved in accordance with the requirements of the Utah regulatory program.

In some instances, DOGM for good cause gave the permittees additional time to submit the

permit revision applications. By the end of evaluation year 2000, the permittees for all of the deficient permits had submitted revised permit applications. However, owing to the submittal of applications late in the evaluation year and/or the existence of some remaining deficiencies, DOGM had not approved two of them by evaluation year's end.

In evaluation year 2001, OSM and DOGM will continue their evaluation of this highwall reclamation topic. They will verify that DOGM and the permittees resolved the highwall reclamation permit deficiencies in accordance with the requirements of the Utah regulatory program and that DOGM's written findings adequately support the permit application approvals.

D. Permit Findings

As a customer service evaluation, DOGM continued a long-term, self-evaluation of the written findings that it prepares for permit applications. DOGM undertook this project on its own initiative, but it is also responsive to OSM Director's June 1, 1999, memorandum requesting a "national priority topic review" of permit findings in primacy States.

DOGM created an Analysis and Findings Review Guide. It is the format that all DOGM staff are to follow in preparing written findings for the mine permit applications that they review. When it is completed by the end of calendar year 2000, the document will help to promote consistency and adequacy of written permit findings.

In response to the OSM Director's memorandum, OSM-Western Region on November 15, 1999, held a meeting, which all seven western primacy States, including Utah, attended. The meeting participants discussed the proper ways to prepare written permit findings. Also, under the Director's guidance, the OSM Technical Training Program staff and a group of OSM and State employees, including a DOGM evaluation team member, developed the outline and information for a Permit Findings Workshop, which will be held at various locations throughout the United States. DOGM hopes to arrange for a workshop in its office in the Spring of 2001.

Appendix. <u>Tabular Summary of Core Data Characterizing the Utah Program</u>

The following tables present data pertinent to mining operations and State and Federal regulatory activities within Utah. They also summarize Utah staffing and OSM funding. Unless otherwise specified, the reporting period for the data contained in all tables is October 1, 1999, through September 30, 2000.

TABLE 1

COAL PRODUCTION^A (Millions of short tons)

Period	Surface mines	Underground mines	Total
1995	0.43	25.73	26.16
1996	0.85	28.09	28.94
1997	0.61	25.79	26.40
1998	0.54	26.95	27.49
1999	0.49	26.08	26.57

A Coal production as reported in this table is the gross tonnage which inclues coal that is sold, used or transferred as reported to OSM by each mining company on form OSM-1 line 8(a). Gross tonnage does not provide for a moisture reduction. OSM verifies tonnage reported through routine auditing of mining companies. This production may vary from that reported by States or other sources due to varying methods of determining and reporting coal production.

INSPECTABLE UNITS As of September 30, 2000 Number and status of permits Inactive Coal mines Disturbed acreage^A Active or and related **Totals** temporarily Abandoned Phase II facilities inactive bond release Insp. PP PP IP PP Total IP PP IP PP IP IΡ Unit STATE and PRIVATE LANDS^B REGULATORY AUTHORITY: UTAH Surface mines 202 202 Underground mines 58 58 Other facilities 514 514 **Subtotals** 774 774 REGULATORY AUTHORITY: UTAH FEDERAL LANDS^C Surface mines Underground mines 19 1454 1454 19 19 Other facilities 81 81 **Subtotals** 21 1,535 1,535 21 ALL LANDS Surface mines 202 202 Underground mines 23 1,512 1,512 22 23 Other facilities 595 595 2,309 2,309 **Totals** Average number of permits per inspectable unit (excluding exploration sites) 1 On Federal lands: 0 Number of exploration permits on State and private lands: . ___2__ Number of exploration notices on State and private lands: . . _ _ 0___ On Federal lands: 6 IP: initial regulatory program sites; PP: permanent regulatory program sites. Almost all of the operations are underground mines. The table shows disturbed, rather than permitted, acreage because disturbed acreage is a more meaningful measure for underground mines. The permitted acreage total was 148,419. Mines or facilities where entire disturbed area occurs on State and/or private lands. Mines or facilities where at least a portion of the disturbed area occurs on Federal lands. Includes only exploration activities regulated by Utah pursuant to the Federal lands cooperative agreement with OSM. Does not include exploration activities regulated by the Bureau of Land Management.

TABLE 3

UTAH PERMITTING ACTIVITY As of September 30, 2000

Type of application		Surface mines		Ur	ndergrou mines			Other facilitie	1		Totals	
а рричесов.	App. Rec.	Issued	Acres	App. Rec.	Issued	Acres	App. Rec.	Issued	Acres	App. Rec.	Issued	Acres
New permits		<u> </u>										
Renewals		1	'	3	5	568				3	5	568
Amendments ^B				1	2	. !			!	1	2	
Incidental boundary revisions		!		1	3	***************************************			**************************************	1	3	
Revisions (exclusive of incidental boundary revisions)				59	37		4	4		63	41	
Transfers, sales and assignments of permit ights												
Small operator assistance			1			1		1				
Exploration permits				2					1	2		
Exploration notices ^C				7	6					7	6	
Totals				73	53	568	4	4		77	57	568

Number of midterm permit reviews completed that are not reported as revisions 8

A Includes only the number of acres of proposed surface disturbance.

^B Under the Utah program, "significant permit revisions" are made when there is an increase in the approved permit size of the surface or subsurface disturbed area in amount of 15 percent or greater. "Amendments" shown in this table are the "significant permit revisions" that Utah processed.

^C Utah approval not required. Involves removal of less than 250 tons of coal and does not affect lands designated unsuitable for mining.

	OFF	ITE 1	OFFSITE IMPACTS ON SIT	S ON	SITES	WHERE	BOND 3	S HAV	TES WHERE BONDS HAVE <u>NOT</u> BEEN FORFEITED	BEEN 1	FORFE	TED		
						RE	RESOURCES AFFECTED	S AFFE	CTED					
	TO A GIANT TO THE GOAD		People			Land			Water			Structures	S	Total
DEGNEE	OF IMFACI	minor	moderate	major	minor	moderate	major	minor	moderate	major	minor	moderate	major	
TVDE	Blasting													
1175	Land Stability													
JO :	Hydrology													
IMPACI	Encroachment													
	Other				1									1
	Total				1									1
Number of	Number of inspectable units:	. 29	Щ	spectable	units fr	Inspectable units free of offsite impacts:	e impacts.	: 28						
Percentage	Percentage of inspectable units free of offsite impacts:	its free	of offsite	impacts:	96									
	10	FSIT	OFFSITE IMPACTS ON	CTS 0		ES WHE	RE BO	NDS H	SITES WHERE BONDS HAVE BEEN FORFEITED	EN FO	RFEIT	ED		
						RE	RESOURCES AFFECTED	S AFFE	CTED				Κ.	
			People			Land			Water			Structures		Total
DEGRE	DEGREE OF IMPACT	minor	moderate	major	minor	moderate	major	minor	moderate	major	minor	moderate	major	
TYPE	Blasting													
OF	Land Stability	· >												
F. C. A. C.	Hydrology													
IMFACI	Encroachment													
	Other													
	Total													
Number of	Number of inspectable units: 5 Inspectable unit	. S. its free	In of officite	spectable	s units fr 100	Inspectable units free of offsite impacts:	te impacts	: 5						

TABLE 5

ANNUAL STATE MINING AND RECLAMATION RESULTS

Bond release phase	Applicable performance standard	Acreage released during this evaluation period
Phase I	Approximate original contour restored	0^{A}
Phase II	 Topsoil or approved alternative replaced Surface stabilized Vegetation established 	$_0$ A
Phase III	 Postmining land use/productivity restored Vegetation successfully and permanently established Groundwater recharge, quality, and quantity restored Surface water quality and quantity restored 	28 ^A
	Bonded acreage status	Acres
	number of bonded acres at end of last icon year (September 30, 1999)	2,349
	number of bonded acres at the end of this tion year (September 30, 2000) ^B	2,309
	er of acres at the end of this evaluation year bonded for remining	0.00
	er of acres where bond was forfeited during aluation year	0.00

A Throughout the history of the Utah permanent regulatory program, the acreage receiving bond release has been low owing to (1) most of the operations being long-lived underground mines with relatively small surface disturbances that remain active during the entire life of the mining operations and (2) a 10-year minimum bond liability period.

^B Bonded acreage in this category is disturbed acreage that had not received a phase III bond release.

REG	CLAMAT	TION ST.	ATUS	OF ALL	AREAS D	RECLAMATION STATUS OF ALL AREAS DISTURBED UNDER THE UTAH PERMANENT REGULATORY PROGRAM^ (Acres)	(Acres)	R THE U	ТАН	PERMA.	NENT	REGUI	ATOI	RY PR	OGRA	Μ [^]		
						As of Seq	ptember	As of September 30, 2000										
	Mine type		Disturb	Disturbed area		Active mining areas (pits and areas in advance of the pits stripped	Areas backfilled and graded	kfilled	Areas w has reles I bond	Areas where Utah has released phase I bond	Areas soiled and seeded/planted	P	Areas where Utah has released phase II bond		Areas final seeded/planted for 10 years		Areas where Utah has released phase	re hase
Permittee, mine name, and permit number	Surface	Under- ground	EY 2000	Total (all years)	Long-term mining or reclamation facilities ^B	of topsoil) and areas not yet backfilled and graded^	EY 2000	Total (all years)	EY 2000	Total (all years)	EY 2000	Total (all years)	EY 2000	Total (all years)	EY (Total (all years)	EY 2000	Total (all years)
Active, temporarily inactive, inactive, and	lactive, and al	abandoned sites.	· .										1	1				2.5
Lodestar Energy, Inc. White Oak #1 and #2/Loadout ACT/007/001	(loadout)	×		140.2	140.2													
Castle Gate Holding Company Castle Gate Mine ACT/007/004		×		63				18.2 (Sow- belly Canyon)		18.2 (Sowbelly Canyon)		18.2						
Canyon Fuel Company, LLC Skyline Mine ACT/007/005		×		72.32	72.32													
Plateau Mining Corporation Star Point Mine ACT/007/006		×		173.2	173.2													
Hiawatha Coal Company Hiawatha Mine ACT/007/011		×		290	290													
Nevada Electric Investment Company Wellington Preparation Plant ACT/007/012	(prepara- tion plant)			392	392													
UtahAmerican Energy, Inc. Horse Canyon Mine ACT/007/013		×		87	87			61.65		61.65		61.65						
Mountain Coal Company Gordon Creek #2, #7, and #8 ACT/007/016		×		17.58	17.58			17.58		-								
Canyon Fuel Company, LLC Soldier Canyon Mine ACT/007/018		X		24	24													
Andalex Resources, Inc. Centennial Mine ACT/007/019		×		35.27	35.27													
Lodestar Energy, Inc. Horizon Mine ACT/007/020		×		9.5	5.6													
Savage Industries, Inc. Savage Coal Terminal ACT/007/022	(preparation plant and loadout)			122	122													
Andalex Resources, Inc. Wildcat Loadout ACT/007/033	(preparation plant and loadout)			09	09													

n Fuel Company, LLC Loadout 37/034	(preparation plant and loadout)			21	21				^				·	
Sunnyside Cogeneration Associates (SCA) SCA ACT/007/035	×			202	202		·		<u> </u>	5.5 (coarse refuse road)				
Plateau Mining Corporation Willow Creek Mine ACT/007/038		×		132.9	132.9	-								
Canyon Fuel Company, LLC Dugout Mine ACT/007/039		×		20.1	20.1									
West Ridge Resources, Inc. West Ridge Mine ACT/007/041		×		29	29									
Consolidation Coal Company Hidden Valley Mine ACT/015/007		×		6.7	6.7			6.7		6.7	6.7			
PacifiCorp Trail Mountain Mine ACT/015/009		×		24.78	24.78			·						
Consolidation Coal Company Emery Deep Mine ACT/015/015		×		40¢	40 ^c								(
PacifiCorp Des-Bee-Dove Mine ACT/015/017		×		23.88 ^D	23.88								-	f
PacifiCorp Deer Creek Mine ACT/015/018		×		95.8	95.8									
PacifiCorp Cottonwood/Wilberg Mine ACT/015/019		×		101.74	101.74									.01 ^E
Co-Op Mining Company Trail Canyon Mine ACT/015/021		×		10				10		01	01	01	01	
Co-Op Mining Company Bear Canyon Mine ACT/015/025		×		24	24								:	
Genwal Resources, Inc. Crandall Canyon ACT/015032		×		20	20									
Canyon Fuel Company, LLC SUFCO Mine ACT/041/002		×		70.98	70.98									
Sites receiving full release of reclamation performance bonds. $^{\mathbb{F}}$	eclamation per	formance bo	¹.sbr										}	
Blackhawk Coal Company Willow Creek Mine ACT/007/002		×		4.2						ο,		٥,		4.20
Mountain Coal Company Gordon Creek #3 and #6 ACT/007/017		×		17.3				17.3		17.3	17.3	17.3	17.3	17.3
Mountain Coal Company Huntington #4 Mine		×		12.5		· .		12.5		12.5	12.5	12.5	12.5	 12.5

Western States Minerals Corp.												-	-	-
J.B. King Mine ACT/015/002		×		28			28		28	78	 ٥,		78	28 28
Bond forfeiture sites.]
Sunnyside Coal Company Sunnyside Mine FOR/007/007		×	28	287.4			287.4			287.4 ^H				
North American Equities Blazon Mine FOR/007/021		×	4	4.65			4.65		4.65					
Summit Minerals Summit #1 FOR/043/001		×		19		·	161	-		91				-
Summit Coal Company Boyer Mine FOR/043/008		×		7			7,			×				
Total	9	31	2.688	8.6 2.235.9	95		489.98		64.5	467.75	39.8	67	67.8	8 62.0

A Blanks in the table denote zeros.

^a Long-term mining or reclamation facilities include haul and access roads; temporary dams and impoundments; bermanent dams and impoundments; diversion and collector ditches; water and air monitoring sites; topsoil stockpiles; overburden stockpiles; repair, storage, and construction areas; coal stockpile, loading, and processing areas; railroads; coal conveyors; refuse piles and coal mine waste impoundments; head-of-hollow fills; valley fills; ventilation shafts and entryways; and noncoal waste disposal areas (garbage dumps and coal combustion by-products disposal areas).

C The mine is in temporary cessation, and the permittee estimated 40 acres of actual disturbance to date. In the permit application package, the permittee has bonded a total of 247 acres for proposed disturbance.

D Not included in this disturbed acreage total are 93.18 disturbed acres in an access road that was removed from the permit area through the bond release process.

^E Channel Canyon portal breakout reclamation; no phase I and II bond release prior to phase III bond release.

^{*} Not shown in the table is the New-Tech Mining Corporation, New-Tech Mine, which disturbed 3 acres. DOGM permitted the site for exploration but never permitted it for fully developed, active mining under the Utah permanent

O No phase I and II bond release prior to phase III bond release.

H Utah forfeited the bond on November 22, 1996. A Utah-hired contractor completed reclamation in July 1999.

Usah forfeited the bond on May 24, 1991. A Utah-hired contractor completed reclamation on October 4, 2000.

¹ Utah forfeited the bond on January 26, 1989. A Utah-hired contractor completed reclamation on November 20, 1997.

^{*} Utah forfeited the bond on June 23, 1989. A Utah-hired contractor completed reclamation on April 17, 1997.

TABLE 7

STATE BOND FORFEITURE ACTIVITY (Permanent Program Permits)

	Sites	Dollars	Acres
Bonds forfeited as of September 30, 1999 ^A	1	38,000 ^B	4.65 ^c
Bonds forfeited during EY 2000	0		
Forfeited bonds collected as September 30, 1999 ^A	. 1	38,000 ^B	4.65 ^c
Forfeited bonds collected during EY 2000	0		
Forfeiture sites reclaimed during EY 2000	0	0 0	0 ^c
Forfeiture sites repermitted during EY 2000	0		
Forfeiture sites unreclaimed as of September 30, 2000	1	enhage:	4.65 ^c
Excess reclamation costs recovered from permittee	0		
Excess forfeiture proceeds returned to permittee	0		

A Includes data only for those forfeiture sites not fully reclaimed as of this date.

^B In addition to the bond forfeiture money, Utah obtained the following additional money for reclamation of the site: \$10,989.27 in interest, \$20,000 from its fines account, \$30,000 from the Division of Wildlife Resources Habitat Council, and \$10,000 of in-kind volunteer services.

^c Disturbed acres.

^D Cost of reclamation, excluding general administrative expenses.

Total UTAH STAFFING (Full-time equivalents at end of evaluation year) EY 2000 2000 A EY 2000 A

TABLE 9

FUNDS GRANTED TO UTAH BY OSM (Millions of dollars) EY 2000^A

Type of grant	Federal funds awarded	Federal funding as a percentage of total program costs
Administration and enforcement	1.53	87.0
Small operator assistance	0.00	0.0
Total	1.53	

^A Numbers in the table are for the grant period July 1, 2000, through June 30, 2001.

OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT

Annual Evaluation Summary Report

for the

Regulatory Program

Administered by the State

of

Utah

for

Evaluation Year 2001

(October 1, 2000, through September 30, 2001)

April 2002

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DIVISION OF OIL, GAS AND MINING

UTAH REGULATORY PROGRAM EVALUATION TEAM

EVALUATION YEAR 2001



Pictured left to right:

Front row: James Fulton, Office of Surface Mining (OSM), coach; Mary Ann Wright, Utah Division of Oil, Gas and Mining (DOGM), coach; Pamela Grubaugh-Littig, DOGM, team coleader; and Susan White, DOGM.

Back row: Daron Haddock, DOGM; Joseph Wilcox, OSM; Priscilla Burton, DOGM; Dennis Winterringer, OSM, team co-leader; Howard Strand, OSM; Gregg Galecki, DOGM; and Peter Hess, DOGM.

Not pictured: Henry Austin, OSM; Paul Baker, DOGM; Robert Postle, OSM; and Ronald Sassaman, OSM.

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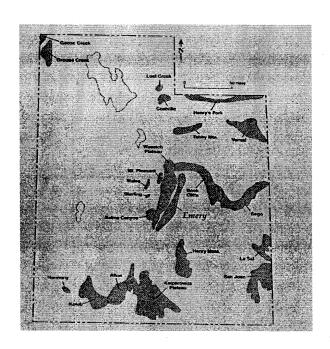
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I. <u>Introduction</u>

The Surface Mining Control and Reclamation Act of 1977 (SMCRA) created the Office of Surface Mining Reclamation and Enforcement (OSM) in the Department of the Interior. SMCRA provides authority to OSM to oversee the administration of and provide Federal funding for State regulatory programs that have been approved by OSM as meeting the minimum standards of SMCRA. This report contains summary information regarding the Utah program and the effectiveness of the Utah program in meeting the applicable purposes of SMCRA as specified in section 102. This report covers the period of October 1, 2000, through September 30, 2001. Detailed background information and comprehensive reports for the program elements evaluated during the period are available for review and copying at the OSM Denver Field Division office.

II. Overview of the Utah Coal Mining Industry

Coal is found beneath approximately 18 percent of the state of Utah, but only 4 percent is considered mineable at this time. The demonstrated coal reserve base is about 6.4 billion tons, which is 1.3 percent of the national reserve base. Most of Utah's coal resources are held by the State and Federal governments and Indian tribes.



Utah coal fields are shown on the figure to the left (Utah Geological Survey, "Survey Notes", September 1998). In 2001, only the Wasatch Plateau and Book Cliffs coal fields were being actively mined. In 2000, these coal fields respectively accounted for 85 and 15 percent of the total production (Utah Department of Natural Resources, Office of Energy and Resource Planning, "2000 Annual Review and Forecast of Utah Coal Production and Distribution", July 2001).

Most of the coal is bituminous and is of Cretaceous age. The Btu value is high compared to most other western States. Sulfur content ranges from medium to low in the more important coal fields.

Coal production steadily increased from the early 1970's and peaked in 1996 at 28.9 million tons. Production in 2000 was slightly less at 28.2 million tons (table 1). The majority of the coal production is produced by underground mining operations, which mostly mine seams exceeding 8 feet in thickness.

As of September 30, 2001, Utah had 27 permitted operations that had disturbed 2,341 acres (table 2). Utah considered each of these operations to be an inspectable unit. All of these

operations were active or temporarily inactive; none were inactive or abandoned (table 2). Of the 27 operations, 11 were underground mines that use the longwall mining method, 11 were underground mines that use the room-and-pillar mining method, 1 was a surface mining operation that extracts coal from an underground mine refuse pile, and 4 were coal preparation plants/loadout facilities.

Utah's coal mining industry has a direct, significant impact on the local economies where mining occurs and an indirect impact on the Wasatch Front and other areas both inside and outside Utah. In 2000, the industry employed 1,672 miners (Utah Department of Natural Resources, Office of Energy and Resource Planning, "2000 Annual Review and Forecast of Utah Coal Production and Distribution", July 2001). In 2000 in Carbon, Emery, and Sevier Counties where coal mining currently occurs, mining, including coal mining, respectively employed 9.3, 22.1, and 4.6 percent of the workforce. In Emery County, a coal mining company was the largest employer. In Carbon County and Sevier County, a coal mining company was respectively one the 7 and 12 largest employers (Governor's Office of Planning and Budget, October 2001; http://www.governor.state.ut.us/dea/Profiles/profiles.html).

The climate of the Wasatch Plateau and Book Cliffs coal fields is characterized by hot, dry summers and cold, relatively moist winters. Normal precipitation varies from 6 inches in the lower valleys to more than 40 inches on some high plateaus. The growing season ranges from 5 months in some valleys to only 2 1/2 months in mountainous regions.

III. Overview of the Public Participation Opportunities in the Evaluation Process and Utah Program

A. <u>Evaluation Process</u>

On March 28, 2001, the OSM and DOGM co-leaders of the OSM/Utah evaluation team sent a letter to 66 persons that work for various Federal, State, and county agencies; coal companies; and other organizations. Enclosed with the letter was the report on the evaluations of the Utah coal regulatory program that the team conducted during evaluation year 2000 (October 1, 1999 through September 30, 2000). In the letter, the team co-leaders identified the topics that the team planned to review in evaluation year 2001 (October 1, 2000, through September 30, 2001). They requested suggestions in writing or by telephone for any other review topics, for changes in the evaluation process described in the 2000 report, and for improvements in future reports.

On the DOGM Internet site, the team also made a copy of the 2000 report available for review and asked for suggestions on the same things. It provided an e-mail link to each of the team coleaders.

The team received one comment on the "Overview of the Utah Coal Mining Industry" section of the 2000 report. The commenter stated that coal mining was important not only to local economies but also to the Wasatch Front and other areas outside Utah. In response to this comment, the team revised this 2001 report.

B. <u>Utah Program</u>

On September 4, 2001, the Southern Utah Wilderness Society appealed to the Utah Board of Oil, Gas and Mining DOGM's July 27, 2001, decision to approve the UtahAmerican Energy, Inc. permit application for the Lila Canyon Mine.

IV. Accomplishments, Issues, and Innovations

A. Accomplishments

Since 1981 when OSM approved the Utah permanent regulatory program, DOGM has forfeited reclamation performance bonds for five mines. At the beginning of evaluation year 2001, DOGM completed reclamation on the one remaining mine, the Blazon No. 1 Mine (table 6).

On August 2, 2001, DOGM held a coal conference in Price, Utah that was attended by over 100 persons. Attendees included State and Federal employees, mining companies, and other interested parties. DOGM coordinated a field trip on the following day to view a Utah Division of Wildlife Resources stream restoration project on the White River near Soldier Summit.

To facilitate State and Federal agency coordination on coal mining permits, DOGM participates in monthly telephone conferences and quarterly meetings with OSM, the Bureau of Land Management, U.S. Forest Service, and Utah State Institutional Trust Lands Administration. DOGM coordination with other State and Federal agencies on coal mining permits is important because most land in Carbon, Emery, and Sevier Counties where coal mining occurs is not privately owned. In these three counties, the Federal government owns 47.3, 79.8, and 77 percent of the land; the State of Utah owns 13.1, 11.9, and 3.7 percent (Governor's Office of Planning and Budget, October 2001; http://www.governor.state.ut.us/dea/Profiles/profiles.html).

DOGM regularly attends and participates in monthly meetings of the Emery County Public Lands Council in Castle Dale, Utah, the Emery County seat. The mission of the Emery County Public Lands Council is to "work in partnership with federal and state agencies in fashioning management decisions and policies affecting lands within Emery County."

B. Issues

On October 1, 1999, the Utah Board of Oil, Gas and Mining adopted and on April 24, 2001, OSM approved through the State program amendment process a revised rule concerning the inspection frequency for abandoned sites. The revised rule allowed DOGM to inspect abandoned sites, which includes bond forfeiture sites, "on a set frequency commensurate with the public health and safety and environmental considerations present at each specific site" but in no case less than one complete inspection per calendar year. To set the inspection frequency at this minimum one-time-per-year level, DOGM would need to conduct a complete inspection, solicit public comment through a newspaper notice, and prepare a written finding justifying the new inspection frequency. During evaluation year 2001, DOGM visited one or more of the five bond forfeiture sites, but it only conducted a total of one official complete inspection on them. DOGM

staff was not aware of the new rule and its procedures for reducing the inspection frequency at bond forfeiture sites.

At the year-end meeting of the team, team coaches, and Director of DOGM, the meeting participants agreed that there needed to be a greater awareness by DOGM and OSM staff of the new statutory provisions and rules adopted by Utah and approved by OSM. Once each calendar quarter during a team meeting, the DOGM person responsible for statute and rule development and the OSM person responsible for State program amendment review and approval will brief the team on the requirements of newly-revised statutes and rules.

DOGM has been very diligent in revising its regulatory program in response to changes in SMCRA and the Federal regulations, but it needs to propose an updated schedule for submission of an amendment addressing the valid existing rights issues that OSM sent to DOGM by 30 CFR Part 732 letter dated September 29, 2000.

After review of DOGM's and the Utah Department of Environmental Quality's (DEQ) implementation of the September 1, 1999, memorandum of understanding between the agencies, DOGM recommended that: (1) DOGM and DEQ should strive to promptly notify each other in emergency spill and emergency water discharge situations, (2) DOGM inspectors should encourage each operator to prepare a telephone list of DOGM and DEQ persons that the operator will call when emergencies occur within the overlapping jurisdictions of the two agencies, and (3) for the reclamation of noncoal waste disposal sites, especially asphalt burial, DOGM and DEQ should clarify to the mine operators that the solid and hazardous provisions of DEQ's "permit by rule" may apply but the operators must apply to DEQ and be granted permit-by-rule status.

C. <u>Innovations</u>

For the sixth consecutive year, persons from OSM and DOGM continued to work as a team to evaluate and assist DOGM in the administration, implementation, and maintenance of the approved Utah regulatory program. During the evaluation year, the team consisted of 14 program and permitting specialists, scientists, and managers from OSM and DOGM.

V. <u>Success in Achieving the Purposes of SMCRA As Determined By Measuring and Reporting End Results</u>

To further the concept of reporting end results and measuring Utah's success in achieving the purposes of SMCRA, OSM and DOGM conducted evaluations and inspections whose purpose was to measure the number and extent of offsite impacts, the percentage of inspectable units free of offsite impacts, the number of acres that have been mined and reclaimed and meet the bond release requirements for the various phases of reclamation, and DOGM's effectiveness of customer service. Reports, which provide additional details on how OSM and DOGM conducted the evaluations and inspections and took the measurements, are available in the OSM Denver Field Division office.

A. Offsite Impacts

An "offsite impact" is anything resulting from a surface coal mining and reclamation activity or operation that causes a negative effect on resources (people, land, water, structures) outside the area authorized by the permit for conducting mining and reclamation activities.

Table 4 shows the number and type of offsite impacts that OSM and DOGM documented as having occurred during the evaluation year.

1. Sites Where DOGM Had Not Forfeited Reclamation Performance Bonds

OSM and DOGM assessed whether offsite impacts had occurred on each of the 28 permitted operations that existed at some time during the evaluation period and for which DOGM had not forfeited reclamation performance bonds. (By the end of the evaluation period, DOGM had fully released the bond for one of these operations.) OSM and DOGM did so through the following 302 on-the-ground observations: 4 OSM and DOGM joint, complete inspections; 113 DOGM complete inspections; and 185 DOGM partial inspections.

OSM and DOGM found two incidents where mines caused hydrology-related offsite impacts: a minor impact to a land resource and a minor impact to a water resource (table 4, top half). Ninety-three percent of the permitted operations (26 of 28) were free of offsite impacts.

This is a lower percentage than the 96 percent OSM and DOGM found in evaluation years 1999 and 2000 (both 28 of 29 operations) but a higher percentage than the 82 and 87 OSM and DOGM found in evaluation years 1998 and 1997 (23 of 28, and 26 of 30 operations).

The high percentages are an indication that Utah is effective at nonforfeiture minesites in preventing offsite impacts to water, people, land, and man-made structures.

2. <u>Sites Where DOGM Had Forfeited Reclamation Performance Bonds</u>

Since 1981 when OSM approved the Utah permanent regulatory program, DOGM has forfeited reclamation performance bonds for five mines. In previous evaluation years, DOGM completed bond forfeiture reclamation on four of the mines (table 6). A few days into evaluation year 2001 DOGM completed reclamation on the one remaining mine, the Blazon No. 1 Mine.

Because reclamation had been completed on all five sites and because three of the sites that had been reclaimed as of the time of the team's minesite reviews in evaluation year 1999 were erosionally stable at that time, the team did not revisit the minesites in evaluation years 2000 and 2001. DOGM conducted a complete inspection on one of the minesites in evaluation year 2001 and did not find any offsite impacts.

Because OSM and DOGM did not observe any offsite impacts on the five bond forfeiture sites, table 4 (bottom half) shows that 100 percent of these sites were free of offsite impacts. In comparison, OSM and DOGM found 100 and 80 percent (4 of 5 operations) of the bond

forfeiture sites free of offsite impacts in evaluation years 2000 and 1999.

The high percentages are an indication that Utah is effective at bond forfeiture minesites in preventing offsite impacts to water, people, land, and man-made structures

OSM and DOGM do not anticipate that offsite impacts from bond forfeiture sites will become an issue of concern in the foreseeable future. There are no ongoing administrative proceedings to forfeit bonds for additional mines. All five of the bond forfeiture minesites have now been entirely reclaimed. Four of the five minesites have minimal surface disturbances (a total of 33.6 acres, an average of 8.4 acres per minesite), which reduces the possibilities for future offsite impacts there.

B. Reclamation Success

1. <u>Sites Where DOGM Had Not Forfeited Reclamation Performance Bonds</u>

For the operations where DOGM had not forfeited reclamation performance bonds, OSM and DOGM used as the measure of reclamation success the disturbed acreage that had received bond release. Historically, the amount of bond release acreage in Utah has been very low due to the following two factors.

- Most of the permitted operations are underground mines (table 2). Underground mining operations are long-lived, and the surface disturbances for them are relatively small and remain active during the entire life of the mining operations because of their continued use as surface facilities.
- The bond liability period is a minimum of 10 years.

Table 5 shows the acreage on active or inactive permits where DOGM partially released (phases I and II) or totally released (phase III) bonds during the evaluation year. For the 2,300 acres of total disturbance that had not yet received final (phase III) bond release at the beginning of the evaluation year, DOGM granted a phase I bond release of 29.9 acres and a phase III bond release of 10 acres. It did not grant any phase II bond releases.

In an effort to get a better understanding of how much acreage is reclaimed and <u>may</u> be eligible for bond release, OSM and DOGM compiled mine reclamation status information for all mines and facilities (coal loadouts and preparation plants) that DOGM has permitted under the Utah permanent regulatory program in the 20 years since OSM approved the program. Table 6 shows the detailed reclamation status of the active and inactive operations, the operations for which DOGM forfeited the reclamation performance bonds, and the operations for which DOGM released all phase III bonds. After reviewing the data in table 6, OSM and DOGM conclude that there is little disturbed acreage that has received reclamation work and that may be eligible for phase I, II, or III bond release.

In addition to the above analysis of bond release acreage, OSM and DOGM also assessed

reclamation success in evaluations of shrub rooting characteristics on a coal refuse pile, plant succession on reclaimed minesites, and highwall reclamation. For a discussion of these evaluations, see following section VII.

2. Sites Where DOGM Had Forfeited Reclamation Performance Bonds

DOGM has completed initial reclamation on all five bond forfeiture sites. Reclamation may be adequate on some of the sites for DOGM to terminate its jurisdiction on them, but it has not yet developed procedures and policy to do so.

C. <u>Customer Service</u>

DOGM conducted a self-evaluation of its interactions with the Utah Department of Environmental Quality (DEQ) in implementing DOGM's and DEQ's September 1, 1999, memorandum of understanding for mining operations.

In response to OSM concerns that States might not be timely in revising their regulatory programs to be no less stringent than the provisions of SMCRA and no less effective than the Federal regulations, OSM in October 2001 compiled a list of statute and rule revisions that Utah needed to make.

These evaluations concerned procedural aspects of DOGM's program (i.e., not on-the-ground results relating to offsite impacts and reclamation success). In a broad sense, these evaluations concerned DOGM's effectiveness in serving its customers. Effective interaction with DEQ in implementing the DOGM and DEQ environmental protection programs and DOGM timeliness in revising its State program statutes and regulations would generally be responsive to the needs of landowners, concerned citizens, and coal mining companies.

For a discussion of these evaluations, see following section VII.

VI. OSM Assistance

For the 1-year grant period starting July 1, 2001, OSM funded the Utah program in the amount of \$1.76 million (table 9). Through a Federal lands cooperative agreement, OSM reimburses DOGM for permitting, inspection, and other activities (table 8) that it performs for mines on Federal lands. Because most of the mines in Utah occur on Federal lands, the percentage of total program costs for which OSM provided funding was high (87 percent, table 9).

In evaluation years 1997, 1998, and 1999, OSM supported the development of an electronic permitting system by providing \$28,151 to DOGM for computer hardware and software. In evaluation year 2000, OSM provided \$6,061 for additional hardware for the system: \$3,873 for a Windows NT workstation for the management of digital data and \$2,188 for two digital cameras for field documentation of inspections and bond releases. In evaluation year 2001, OSM provided \$6343 for the purchase of a high speed color scanner for permit maps and charts.

Under its Technical Training, Technical Information Processing System, and Technology Transfer Programs, OSM offers free of charge a variety of courses, workshops, and forums to State and Tribal employees. As described below, 18 DOGM employees participated in these activities during the evaluation year.

DOGM employees attended the following Technical Training Program courses and workshops: Effective Writing Workshop, Enforcement Procedures, Instructor Training Course, Permit Findings Workshop, Permitting Hydrology, Surface and Groundwater Hydrology, and Underground Mining Technology. DOGM employees assisted in the teaching of the following Technical Training Program workshops: Administrative and Legal Aspects of Bonding and Permit Findings.

DOGM employees attended the following Technical Information Processing System courses: AquaChem, AutoCAD Map, CAD Applications, and Statgraphics. A DOGM employee assisted in the development and teaching of the AquaChem course.

A DOGM employee attended and made a presentation entitled "Mitigation for Culverting a Stream Used by Colorado River Cutthroat Trout" at OSM's interactive forum on "Approaching Bond Release: Wildlife Habitat Construction and Wildlife Use of Reclaimed Lands in Arid and Semi-Arid West," which was held August 27 through 31, 2001, in Gillette, Wyoming.

OSM and DOGM jointly funded a research project that was conducted by a DOGM hydrologist and a consultant. Their research concerned how to determine whether or not a spring's flow is being affected by natural climate patterns or is being affected by mining activities. The researchers documented their findings in a professional paper entitled "Correlation Between Natural Spring Flow and the Palmer Hydrologic Drought Index" and presented them at the 18th National Meeting of the American Society for Surface Mining Reclamation, which was held June 3 through 7, 2001, in Albuquerque, New Mexico.

OSM's Bonding Specialist assisted DOGM during its preparation of a State program amendment concerning surety bonds.

In response to 10 requests by DOGM staff, OSM's technical librarian provided various information, including copies of 166 journal article reprints, 4 publications, and 2 CD-ROM's.

VII. Evaluation Topic Reviews

Each year OSM and DOGM evaluate topics to determine whether DOGM is effective in preventing offsite impacts, ensuring reclamation success, and serving its customers. Following are discussions of the evaluations that they conducted in the time period from October 1, 2000, through September 30, 2001. Written reports for these topics are available for review in the OSM Denver Field Division office.

A. Rooting Characteristics of Shrubs Established on a Coal Refuse Pile

Underground coal mines create coal refuse piles that are composed of underground development waste and coal processing waste. Underground development waste is a waste-rock mixture of coal and rock that is excavated and disposed of from underground mine workings. Coal processing waste is earth material that is separated and removed from coal during cleaning and preparation of the coal for market. Because most of Utah's operations are underground mines that have coal refuse piles, their reclamation is important to the success of the Utah program.

While the coal refuse in Utah is generally considered nontoxic, it was unknown whether it provided a suitable root growth medium. To determine whether coal refuse is a suitable plant growth medium, OSM and DOGM during evaluation year 2001 evaluated shrub rooting depths on a reclaimed coal refuse pile and on an adjacent revegetated subsoil stockpile.

The coal refuse pile had varying depths of topsoil and subsoil placed on its surface during reclamation. Vegetation had been planted on both the coal refuse pile and subsoil stockpile as long ago as 17 years ago, so shrub roots were well-developed.

The coal mining operator provided a backhoe to excavate five pits in the refuse pile and five pits in the subsoil stockpile. Pits were dug adjacent to established shrubs so that rooting characteristics could be studied.

Shrubs became well established on both the coal refuse pile and subsoil stockpile, but roots appeared to be better developed in the subsoil stockpile, including the development of well-defined taproots. In the refuse pile, roots grew straight downward until they came to the interface of the soil and refuse where they moved laterally before finally entering the refuse material. Based upon its field observations and review of scientific literature, OSM and DOGM concluded that the growth of roots into refuse was atypical compared to growth of roots into an adjacent subsoil stockpile of the same age.

Medium and coarse roots grew 4 to 5 feet deep in the subsoil stockpile, whereas medium and coarse roots were limited to the top 2 feet of the soil-covered refuse. Above 2 feet, the refuse would have been subject to freeze and thaw cycles that would reduce the bulk density and decrease compaction, creating a more conducive environment for medium and coarse root growth. To a lesser degree the ability of very fine roots to penetrate the refuse was also limited.

Compaction and moisture may have played a role in the differences in root growth on the refuse pile and subsoil stockpile. Compaction of refuse piles is required under Mine Safety and Health Administration regulations at 30 CFR 77.215 as a strategy to avoid combustion. As a consequence, compaction of the refuse material was much higher than the compaction of the soil in the subsoil stockpile. Also, the subsoil stockpile was located in a topographic position where precipitation run-on is likely, thereby enhancing water availability for deeper root growth.

It is important to note that roots eventually did penetrate the refuse material and the woody plant species had no noticeable qualitative differences in the above-ground vegetative growth. The

lack of taproot penetration into the refuse did not affect the ability of the soil-covered refuse to support a plant community that met the revegetation success criteria for cover and shrub density.

However, as added insurance for revegetation success, OSM and DOGM recommend that different reclamation techniques be used in the future on coal refuse piles. Root growth into soil-covered refuse could be enhanced by ripping of the surface prior to soil cover placement. The recommended depth of ripping is inversely related to the depth of cover, so that a less compacted root zone of 4 feet is achieved. If the refuse is combustible, then the recommended soil cover depth should be 4 feet to allow for a rooting zone, while protecting against combustion. Working the soil cover into the refuse surface to avoid an abrupt boundary layer is also recommended.

B. Plant Succession and Native Plant Invasion on Reclaimed Mines

In evaluation year 2001, OSM and DOGM began an evaluation of plant succession and native plant invasion on reclaimed mines.

Most reclaimed mines in Utah are meeting vegetation cover, productivity, and diversity success standards, but it is not known, other than through casual observations, what successional changes occur over time in communities of reclaimed vegetation. The early focus of revegetation was to control erosion, so aggressive plant species were used in the revegetation seed mixture. It was thought that over time the surrounding native species would invade and eventually replace the seeded species.

Because most Utah operations are underground mines that have relatively small surface disturbances, reclaimed areas are small compared to those in many other States. They tend to have large border length/surface area ratios that should favor native species invasion.

OSM and DOGM are conducting this evaluation to determine to what extent vegetation composition changes over time and to determine whether species native to the surrounding vegetative community are invading the reclaimed sites. Depending upon the results of the evaluation, OSM and DOGM could make recommendations for changes in seeding rates.

OSM and DOGM will continue this study in evaluation year 2002.

C. <u>Highwall Elimination and Retention As a Part of Approximate Original Contour Restoration</u>

OSM and DOGM conducted a multiyear review of highwall elimination and retention as a part of approximate original contour restoration.

During evaluation year 1997, DOGM prepared a detailed inventory of the 97 highwalls in the State. The inventory serves as a useful compendium of information on reclamation requirements and plans for each of the highwalls. In using the highwalls inventory, OSM and DOGM identified deficiencies in highwall reclamation plans in one-fifth of the mine permits (seven permits).

In evaluation year 1998, DOGM developed a prioritized schedule for the permittees to submit proposed permit revisions to correct the deficiencies and for DOGM to review the proposals. The permit revision due dates ranged from August 1998 to February 2000. By letters dated March 3 and 5, 1998, DOGM notified each of the permittees of the permit revision submission deadlines.

In evaluation years 1999 and 2000, OSM and DOGM (1) tracked the permit revision submission dates and DOGM permit revisions review dates to determine whether the schedule was being adhered to and (2) reviewed the revised permits to verify that the permit deficiencies were being resolved in accordance with the requirements of the Utah regulatory program.

By the end of evaluation year 2001, DOGM had approved all of the revised permits. DOGM improved its technical analyses that were the bases for approving the highwall reclamation plans. DOGM should continue to emphasize the writing of analyses that address all highwall reclamation requirements of the Utah regulatory program and that adequately support the decisions to approve the highwall reclamation plans.

D. <u>Implementation of Utah Interagency Agreement</u>

As the result of their review of citizen complaints during evaluation year 1996, OSM and DOGM concluded that communication on water quality problems at coal mines could be improved between DOGM and the Utah Department of Environmental Quality (DEQ), the Utah Pollutant Discharge Elimination System permitting authority.

In evaluation year 1997, OSM and DOGM recommended that the October 16, 1990, memorandum of understanding (MOU) between DOGM and DEQ be revised to include provisions for DEQ to notify DOGM of violations of Utah Pollutant Discharge Elimination System permits and of the water quality standards at 40 CFR Part 434.

During evaluation year 1998, DOGM transmitted proposed MOU revisions to DEQ.

On September 1, 1999, the directors of DOGM and DEQ signed a revised MOU. In the revised MOU, the agencies agreed to coordinate more closely in enforcing water quality standards on coal mines and to cooperate on other matters where they both have jurisdiction.

In evaluation year 2001, DOGM reviewed the interactions that had occurred between DOGM and DEQ since the signing of the MOU to determine whether the MOU provisions were being implemented.

Through the use of a questionnaire and interviews with DEQ employees, DOGM concluded that DOGM and DEQ are generally communicating with each other as intended by the MOU. Recommendations for improvements in the implementation of the overlapping parts of the DOGM and DEQ programs included:

- The need for better communication between DEQ and DOGM in emergency spill and emergency water discharge situations,
- Preparation of a telephone "call down" list by each coal mining operator to ensure that the operator notifies both DEQ and DOGM about emergencies that concern both agencies, and
- For the reclamation of noncoal waste disposal sites, especially asphalt burial, clarify to the mine operators that the solid and hazardous provisions of DEQ's "permit by rule" may apply but that they must apply to DEQ and be granted permit-by-rule status.

E. Outstanding Regulatory Program Amendments

On November 14, 2000, the West Virginia Highlands Conservancy filed a lawsuit alleging that OSM had failed to require the State of West Virginia to maintain and enforce its regulatory program as Congress intended. Of particular concern was the State's alleged failure to submit amendments required under Subchapter T of the 30 CFR regulations and to respond to letters OSM sent to the State under 30 CFR Part 732 in which it described provisions of the State's program that need to be revised.

In response to the concern that other States might not be timely in revising their regulatory programs to be no less stringent than the provisions of SMCRA and no less effective than the Federal regulations, OSM compiled a list of statute and rule revisions that DOGM needs to make.

As of the end of evaluation year 2001, DOGM had not yet revised its program to incorporate all of the counterparts to the SMCRA and Federal regulation changes that OSM notified it of in the following 30 CFR Part 732 letters: ownership and control, January 13, 1997; miscellaneous topics, June 19, 1997; and valid existing rights, September 19, 2000.

Subsequent to the January 13, 1997, ownership and control letter, OSM on December 19, 2000, promulgated new ownership and control regulations. Industry filed a lawsuit contesting these regulations. Because of the lawsuit, OSM postponed sending 30 CFR Part 732 letters to the States that would require them to adopt counterparts to the December 19, 2000, regulations. OSM does not expect DOGM to amend its ownership and control rules until the outcome of the lawsuit is known and OSM sends another 30 CFR Part 732 letter to DOGM.

With respect to the June 19, 1997, letter addressing miscellaneous topics, DOGM has revised its statutes and regulations for all topics except those concerning the Small Operator Assistance Program. In early 2002, the Utah legislature is scheduled to consider statute changes. Following enactment of the statutes, DOGM would propose rules to OSM.

DOGM projected that by early September 2000 it would adopt a formal rule to address the issues in the September 19, 2000, valid existing rights 30 CFR Part 732 letter, but it did not meet that schedule. DOGM needs to propose to OSM a new schedule for adopting a formal valid existing rights rule.

OSM concludes that Utah has been very diligent in revising its regulatory program in response to OSM's 30 CFR Part 732 letters. With only a few exceptions (ownership and control, Small Operator Assistance Program, and valid existing rights), Utah's regulatory program is no less stringent than SMCRA and no less effective than the Federal regulations.

Appendix. Tabular Summary of Core Data Characterizing the Utah Program

The following tables present data pertinent to mining operations and State and Federal regulatory activities within Utah. They also summarize Utah staffing and OSM funding. Unless otherwise specified, the reporting period for the data contained in all tables is October 1, 2000, through September 30, 2001.

COAL PRODUCTION

(Millions of short tons)

Annual			
Evaluation	Surface	Underground	
Period	mines	mines	Total
Coal production for 6	entire State:		
1998	0.540	26.950	27.490
1999	0.490	26.080	26.570
2000	0.582	27.660	28.242
Total	1.612	80.690	82.302

A Coal production as reported in this table is the gross tonnage which includes coal that is sold, used or transferred as reported to OSM by each mining company on form OSM-1 line 8(a). Gross tonnage does not provide for a moisture reduction. OSM verifies tonnage reported through routine auditing of mining companies. This production may vary from that reported by States or other sources due to varying methods of determining and reporting coal production.

						LE UN er 30, 2			-			
		Nı	ımber									
Coal mines	Activ tempo	rarily	Inac								rbed ac	_
and related facilities	inac	tive	Phas bond r		Aban	doned	Tota	als	Insp. Units ^D			
Tuemeres	IP	PP	IP	PP	IP	PP	IP	PP	Omes	IP	PP	Total
STATE AND PRIVA	TE LAN	IDS ^B	REGUI	LATOR	Y AUT	HORIT	Y: UTA	Н				
Surface mines	1	1					0	1	1		2.02	2.02
Underground mines		3					0	3	3	2	0.61	0.61
Other facilities		2					0	2			5.14	5.14
Subtotals	0	6	0	0	0	0	0	6	6	0	7.77	7.77
FEDERAL LANDS ^C		R	EGULA	TORY	AUTH	ORITY	: UTAH	Í			~	
Surface mines							0	0				0
Underground mines		19					0	19	19		14.786	14.786
Other facilities		2					0	2			0.85	0.85
Subtotals	0	21	0	0	. 0	0	0	21	21	0	15.636	15.636
ALL LANDS												
Surface mines		1	İ				. 0	1	1		2.02	2.02
Underground mines		22					0	. 22	22		15.396	
Other facilities		4					0	4	4	· · · · · · · · · · · · · · · · · · ·	5.99	5.99
Totals	0	27	0	0	0	.0	0	27	27	0	23.406	23.406
Average number of per Average number of acr		_				•			0.867			
Number of exploration	permits	on Stat	e and pr	ivate laı	nds:	2			On Fed	eral lan	ds ^D :	0
Number of exploration	notices	on State	e and pri	vate lan	ıds:	0			On Fed	eral lan	ds ^D :	8
IP: Initial regulatory progra PP: Permanent regulatory p		es										
A Almost all of the operation disturbed acreage is a more Mines or facilities where a Mines or facilities where a Includes only exploration not include exploration act	e meaning entire distu at least a po activities r	ful measurbed area ortion of egulated	re for und coccurs on the disturb by Utah pu	erground State and ed area of irsuant to	mines. To private cours on Figure 1	he permitt te lands. Federal lan ral lands c	ed acreage	was 163	,775.			

STATE PERMITTING ACTIVITY As of September 30, 2001

Type of		Surface mines	,	Un	dergrou mines	ınd		Other facilities	S		Totals	
Application	App. Rec.	Issued	Acres	App. Rec.	Issued	Acres ^A	App. Rec.	Issued	Acres	App. Rec.	Issued	Acres
New Permits										0	0	C
Renewals				7	5	421				7	5	421
Amendments ^B		Í		2	4	48				2	. 4	48
Transfers, sales and assignments of permit rights										0	0	
Small operator assistance										0	0	
Exploration permits				2	2					2	2	
Exploration notices ^C					8						8	
Revisions (exclusive of incidental boundary revisions)					52			7			59	
Incidental boundary revisions											0	0
Totals	0	0	0	11	71	469	0	7	0	11	78	469

Number of midterm permit reviews completed that are not reported as revisions.

5

A Includes only the number of acres of proposed surface disturbance.

Under the Utah program, "significant permit revisions" are made when there is an increase in the approved permit size of the surface or subsurface disturbed area in the amount of 15 percent or greater. "Amendments shown in this table are the "significant permit revisions" that Utah processed.

^C State approval not required. Involves removal of less than 250 tons of coal and does not affect lands designated unsuitable for mining.

		OFFSI	TE IMP	VCTS O	NSITE	<u>OFFSITE IMPACTS ON SITES WHERE BONDS HAVE NOT BEEN FORFEITED</u>	E BONI	S HAV	E NOT	BEEN I	ORFEI	TED		
DEGREE OF	OF					RESOURCES AFFECTED	RES A	FFECTI	3D					
IMPACT	L		People			Land			Water		-	Structures	9	Total
		minor	moderate	major	minor	moderate	major	minor	moderate	major	minor	moderate	major	
Blasting	ing													0
TYPE Land	Land Stability													0
OF Hydro	Hydrology				1									2
IMPACT Encro	Encroachment													0
Other														0
Total		0	0	0	1	0	0	1	0	0	0	0	0	2
Total number of inspectable units:	nspectable	units:		28						-				
Inspectable units free of offsite impacts:	ree of offs	ite impacts:		26										
		OFF	OFFSITE IMPACTS ON SI	IPACTS		TES WHERE BONDS HAVE BEEN FORFEITED	ERE BO	NDS H	AVE BE	EN FO	RFEITE	J.D		
DEGREE OF	OF					RESOURCES AFFECTED	CES AF	FECTE	Q'					
IMPACT	L		People			Land			Water			Structures	70	Total
		minor	moderate	major	minor	moderate	major	minor	moderate	major	minor	moderate	major	
Blasting	ing													0
E E	Land Stability													0
	Hydrology													0
IMPACT Encre	Encroachment													0
														0
Total		0	0	0	0	0	0	0	0	0	0	0	0	0
Total number of inspectable units:	nspectable	units:		5										
Inspectable units free of offsite impacts:	free of offs	ite impacts:		5										
·					_									

TABLE 5

ANNUAL STATE MINING AND RECLAMATION RESULTS

Bond release phase	Applicable performance standard	Acreage released during this evaluation period
Phase I	Approximate original contour restoredTopsoil or approved alternative replaced	29.90 ^A
Phase II	Surface stabilityEstablishment of vegetation	0.00 ^A
Phase III	 Post-mining land use/productivity restored Successful permanent vegetation Groundwater recharge, quality and quantity restored Surface water quality and quantity restored 	10.00 ^A
	Bonded Acreage Status	Acres
Total number of	bonded acres at end of last evaluation year	
(September 30, 2	$(000)^{B}$	2,300.00
Total number of	bonded acres at end of this evaluation year	2,340.78
(September 30, 2		
	at end of this evaluation period that are bonded	
for remining		0.00
year	where bond was forfeited during this evaluation	0.00

A Throughout the history of the Utah permanent regulatory program, the acreage receiving bond release is low owing to (1) most of the operations being long-lived underground mines with relatively small surface disturbances that remain active during the entire life of the mining operations and (2) a 10-year miniumum bond liability period.

Bonded acreage in this category is disturbed acreage that has not received phase III bond release. (Utah maintains jurisdiction).

	R	ECLAM	ATION S	TATUS	OF ALL A	RECLAMATION STATUS OF ALL AREAS DISTURBED UNDER THE UTAH PERMANENT REGULATORY PROGRAM" Acres Disturbed As of September 30, 2001	RBED UI	NDER TI	HE UTAI mber 30,	H PERM. 2001	ANENT	REGUL,	ATORY	PROGR	ΛΜ ^Λ			
	Mine type	type	Disturbed area		<u> </u>	Active mining areas (pits and areas in advance of the pits stripped of	Areas back grac	Areas backfilled and graded	Areas where Utah has released phase I bond	ere Utah d phase I	Areas soiled and seeded / planted		Areas where Utah has released phase II bond		Areas final seeded / planted for 10 years		Areas where Utah has released phase III bond	re Utah i phase III d
Permittee, mine name, and sernit number		Under- ground	EY 2001	Total (all years)	nining or clamation facilities ^B	topsoil) and areas not yet backfilled and graded	EY 2001	Total (all years)	EY 2001	Total (all years)	EY 7	Total (all years)	EY T	Total (all years)	EY 1	Total (all years)	EY 2001	Total (all years)
Active: temporarify inactive	, inactive, a	inactive; and abandoned sites	ed sites					Table Section							T1000	100		Contract Contract
Lodestar Energy, Inc. White Oak #1 and #2/ Loadout	Condons	>							<u>.</u>									
Castle Gate Holding	(noggon)	<		140.7	140.7	/		F										
Castle Gate Mine C/007/004		×		63		14.9		48.1	29.9	48.1		48.1						
Canyon Fuel Company, LLC								·										
CX07/005		×		74.31	74.31								-					
Plateau Mining Corporation Star Point Mine		>		330	71C	-								N.	3			
Hiawatha Coal Company				027	017		7	4							\parallel			
C/007/011		×		280	290													
Nevada Electric Investment Company						,												
Wellington Preparation	(prepara-					-												
C/007/012	plant)			392	392													
Utah American Energy, Inc.																		
Horse Canyon Mine C/007/013		×	-	87	25.35			61.65		61.65		61.65						
Mountain Coal Company Gordon Creek #2, #7, and #8																		
C/007/016		×		17.58				17.58										
Canyon Fuel Company, LLC Soldier Canyon Mine CO07/018		×		21.82	21.82													
Andalex Resources, Inc. Centennial Mine C/007/019		×		35.27														
Lodestar Energy, Inc. Horizon Mine C/007/020		×		9.5														
Savage Industries, Inc. Savage Coal Terminal C/007/022	(preparation tion plant and loadout)			122	122													
Andalex Resources, Inc.	(prepara- tion							•	·									

5.5	
/	
6.7	
;	
	27.36
14.9 4 143.53	2182.35

Mountain Coal Commun		_	_	_	·			_	_	_	-			-	
					y -	-									
	×	17.3				17.3		17.3	17.3		17.3		17.3	_). E.
1											-				
	×	12.5				12.5		12.5	12.5	·	12.5		12.5		12.5
l												-		_	

	×	28				28		28	. 28				78		28
	5	72				8:29	-	67.8	67.8		39.8	-	8.79	01	72
	Bond forfeiture sites "States and a second			The state of the state of								11.5×2.16×2.1			
L										-				_	
									287.4						
	×	287.4	-			287.4									
							-	-							
									4.65						
	×	4.65		-		4.65			*						
L				-								-			
									61						
	×	61	V.		-	61			_						***************************************
								-	7						
	×	7				7			Σ						
	4	318.05				318.05			318.05					-	
1	31 12.0	12.64 2730.83	2182.35	14.9	4	529.38	59.9	189.75	0 502.3	0	39.8	0	8.79	01	72.01

ABlanks in the table denote zeros.

Bong-term mining or reclamation facilities include haul and access roads; temporary dams and impoundments; diversion and collector ditches; water and air monitoring sites; topsoil stockpiles; overburden stockpiles, repair, storage, and construction areas; coal stockpile, loading, and processing areas; railroads; coal conveyors; refuse piles and coal mine waste impoundments; head-of-hollow fills; valley fills; ventilation shafts and entryways; and noncoal waste disposal areas).

^CAdditional 35.49 acres approved for disturbance as a part of the Lila Canyon facilities. However, not yet disturbed.

^DThe mine is in temporary essation, and the permittee estimated 40 acres of actual disturbance to date. In the permit application package, the permittee has bonded a total of 247 acres for proposed disturbance.

ENOt included in this disturbed acreage total are 93.18 disturbed acres in an access road that was removed from the permit area through the bond release process.

^FChaunel Canyon portal breakout reclamation; no phase I and II bond release prior to phase III bond release.

^GAdditional 18.67 acres approved for disturbance. However, not yet disturbed.

[&]quot;Not shown is the New-Tech Mine Corporation, New-Tech Mine, which disturbed 3 acres. DOGM permitted the site for exploration but never permitted it for active mining under the Utah permanent regulatory program.

No phase I and II bond release prior to phase III bond release.

Utah forfeited the bond on November 22, 1996. A Utah-hirred contractor completed reclamation in July 1999,

^KUtah forfeited the bond on May 24, 1991. A Utah-hired contractor completed reclamation on October 4, 2000.

^LUtah forfeited the bond on January 26, 1989. A Utah-hired contractor completed reclamation on November 20, 1997.

^MUtah forfeited the bond on June 23, 1989. A Utah-hired contractor completed reclamation on April 17, 1997.

STATE BOND FORFEITURE ACTIVITY

(Permanent Program Permits)

Bond Forfeiture Reclamation Activity by SRA	Number of Sites	Acres
Sites with bonds forfeited and collected that were unreclaimed as of September 30, 2000 (end of previous evaluation year) ^A	1	4.65
Sites with bonds forfeited and collected during Evaluation Year 2001 (current year)	0	0.00
Sites with bonds forfeited and collected that were re-permitted during Evaluation Year 2001 (current year)	0	0.00
Sites with bonds forfeited and collected that were reclaimed during Evaluation Year 2001 (current year)	1	4.65
Sites with bonds forfeited and collected that were unreclaimed as of September 30, 2001 (end of current year) ^A	0	0.00
Sites with bonds forfeited but uncollected as of September 30, 2001 (end of current year)	0	0.00
Surety/Other Reclamation (In Lieu of Forfeiture)		
Sites being reclaimed by surety/other party as of September 30, 2000 (end of previous evaluation year) ^B	0	0.00
Sites where surety/other party agreed to do reclamation during Evaluation Year 2001 (current year)	0	0.00
Sites being reclaimed by surety/other party that were re-permitted during Evaluation Year 2001 (current year)	0	0.00
Sites with reclamation completed by surety/other party during Evaluation Year 2001 (current year) ^C	0	0.00
Sites being reclaimed by surety/other party as of September 30, 2001 (current evaluation year) ^B	0	0.00

A Includes data only for those forfeiture sites not fully reclaimed as of this date

^B Includes all sites where surety or other party has agreed to complete reclamation and site is not fully reclaimed as of this date

This number also is reported in Table 5 as Phase III bond release has been granted on these sites

UTAH STAFFING (Full-time equivalents at the end of evaluation year)

Function	EY 2001
Regulatory Program	
Permit review	15
Inspection	5.00
Other (administrative, fiscal, personnel, etc.)	3.00
Total	23.00

FUNDS GRANTED TO UTAH BY OSM

(Millions of dollars)

EY 2001

Type of Grant	Federal Funds Awarded	Federal Funding as a Percentage of Total Program Costs
Administration and Enforcement	\$1.76	87
Small Operator Assistance	\$0.00	0
Totals	\$1.76	